

DOCUMENT RESUME

ED 370 159

EA 025 504

AUTHOR Press, Harold L.

TITLE Costs and Consequences: An Examination of the Potential for Consolidation within the Education System and the Associated Costs. Background Report Prepared for Royal Commission on Education, Newfoundland and Labrador.

INSTITUTION Newfoundland and Labrador Dept. of Education.

PUB DATE 92

NOTE 126p.

PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC06 Plus Postage.

DESCRIPTORS *Cost Effectiveness; *Cost Estimates; *Costs; *Educational Finance; Elementary Secondary Education; Expenditures; Foreign Countries; State Church Separation

IDENTIFIERS *Labrador; *Newfoundland

ABSTRACT

Newfoundland's denominational system of education--in which a small number of Christian denominations have the exclusive right to operate all publicly funded schools--has long been criticized for being both discriminatory and costly. This document presents findings of a study that examined the costs associated with Newfoundland's denominational education system and the costs associated with further consolidation. A cost-analysis model (restricted to an analysis of expenditures) compared four different education system models: (1) Model A, a denominational model based on current efficiencies (the status quo model); (2) Model B, a denominational model with a maximum level of school-district consolidation; (3) Model C, a nondenominational model based on the current level of efficiency; and (4) Model D, a nondenominational model with a maximum level of school-district consolidation. Data were obtained from Department of Education databases; expert panels, focus groups, and interviews; a survey of 10 school boards on operating costs; and a survey of 14 school boards on central-office staff costs. Findings show that implementation of Model D would result in a \$6.8 million annual reduction from the status quo. Adoption of Model B would generate savings of approximately \$21.3 a year; however, it would necessitate cutting teacher salaries and staff positions. A conclusion is that the real issue is one of how much change is best. Twelve figures and 23 tables are included. Contains 34 references. (LMI)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

**COSTS AND CONSEQUENCES:
An Examination of the Potential for Consolidation
within the
Education System and the Associated Costs**

Background Report

Prepared for

Royal Commission on Education
Newfoundland and Labrador

Harold L. Press

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it
 Minor changes have been made to improve reproduction quality

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

1992

PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

H. L. Press

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC) "

**COSTS AND CONSEQUENCES:
An Examination of the Potential for Consolidation
within the
Education System and the Associated Costs**

Background Report

Prepared for

**Royal Commission on Education
Newfoundland and Labrador**

Harold L. Press

1992

TABLE OF CONTENTS

I	INTRODUCTION	1
	Background	1
	Methodology	5
	Data Sources	12
	Validation and Interpretation.	14
2	CONTEXTUAL ISSUES IN EDUCATION FINANCE	15
	What is Education Finance?	15
	Financing Education in Canada	16
	Financing Education in Newfoundland	
	18
	Principles of Education Finance	20
	Financing Education in Canada	16
	Economics of Scale vs Organizational Efficiency	22
	School Board Organization	22
	School Organization	24
	School Size	26
3	PRESENTATION AND INTERPRETATION OF DATA:	
	Denominational Paradigms.	29
	Model A - The Existing Denominational System	29
	Model B - A Rational Denominational System	46
4	PRESENTATION AND INTERPRETATION OF DATA:	
	Non-denominational Paradigms	63
	Model C - A Non-denominational System	63
	Model D - A Rational Non-denominational System	79
5	CONCLUSIONS	91
	Bibliography	95

LIST OF TABLES

1	Summary of Data Sources	12
2	Predicted School Operating Costs by School Size Category	14
3	Sources of School Board Revenues by Province, 1989-90	17
4	Background Information by Denominational Constituency, 1989-90.	31
5	Schools, Teachers and Enrolment by School District: Model A	36
6	Academic Allocations by School District: Model A	37
7	School Board Expenditures by Denominational Jurisdiction, 1989-90.	40
8	Per-pupil Expenditures by Type of Service by School District, 1989-90.	45
9	Enrolment, Schools, Average School Size, and Small School Enrolment by School District, No Consolidation, Model B	50
10	Criteria for the Further Consolidation of Schools within the Denominational System	51
11	Background Information by Denominational Constituency, with Consolidations, Model B.	52
12	Examples of Communities for which Consolidation along Denominational Lines is Recommended	55
13	Academic Allocations by School District, Model B.	57
14	School Board Expenditures by Denominational Jurisdiction, Models B and A. .	58
15	Enrolment, Schools, Average School Size, and Small School Enrolment by School District, No Consolidation, Model C	66
16	Enrolment by School District by Denomination, Model A and C	67
17	Examples of Communities where Consolidation of Schools across Denominational Lines is Recommended	69
18	Academic Allocations by School District, Model C.	71
19	School Board Expenditures for Sample District and Total Province, Models C and A.	74
20	Enrolment, Schools, Average School Size, and Small School Enrolment by School District, with Model C Consolidation, Model D	81

21	Enrolment by School District by Denomination, Model D	81
22	Academic Allocations by School District, Model D	84
23	School Board Expenditures for Total Province, All Models	85

LIST OF FIGURES

1	Consolidation and Co-operation in Education	7
2	Framework for the Development of Individual Cost Models	9
3	Interrelationships between Models.	9
4	Steps Involved in the Costing of Model B	10
5	Map: Model A - Integrated School Districts	32
6	Map: Model A - Roman Catholic School Districts	33
7	Map: Model B - Integrated School Districts	48
8	Map: Model B - Roman Catholic School Districts	49
9	Map: Model C - School Districts	65
10	Map: Model D - School Districts	82
11	Total Operating Costs under Each Model, 1989-90	92
12	Difference between Individual Models, 1989-90	93

1

INTRODUCTION

A great deal of criticism has been showered upon the education system for various reasons in recent years. This attention has not been unique to this province, for that matter this country. Education reform has been on the forefront of the political agenda in many countries. For most, no longer is there scope for any increase in public expenditure on education and for many there is even a policy of retrenchment (OECD, 1984).

Increased demands on the public purse from other sources, coupled with a declining educational constituency emanating from rapidly shifting demographic conditions, have led to a decline in financial support. At the same time that financial support has been declining, schools have been challenged with increased demands on their time and resources. Teachers have been asked to assume a number of responsibilities formerly handled by the family, the community and government agencies without proper inservice training, adequate resources and little input in the decision process.

This province finds itself in a less than enviable position. On the one hand, it is suffering many of the same difficulties as many other jurisdiction – greater demands, large-scale demographic shifts, declining financial support, and increased accountability. But Newfoundland is also affected far more severely than most. For example, the province's exceptionally low fertility rate, which is expected to continue to decline, and out-migration will continue seriously to affect enrolments for some years (Press, 1990).

Background

Problems facing our education system are also exacerbated by the presence of the denominational educational structure. Unique among Canadian provinces, the

denominational system of education in Newfoundland – where a small number of Christian denominations have the exclusive right to operate all publicly funded schools – has long been criticized on the grounds that it is both discriminatory and costly. In addition, the exclusion of disenfranchised individuals, religious minorities or other concerned groups from active participation on school boards or decision-making at any level has been a central theme of human rights advocates. The issue is described succinctly in a brief to the Royal Commission by the Board of the Newfoundland and Labrador Human Rights Association (#655). It stated:

The system discriminates against students, teachers, parents, and candidates for school board elections who are not members of one of the designated Denominations. It discriminates against students and parents who are not members of one of the preferred groups by obliging them to attend a school which is contrary to their beliefs. It discriminates against parents who in conscience, do not believe in a union of church and state. It discriminates against teachers by essentially requiring them to be a member of one of the Denominations designated in the Schedule to the Schools Act. It further requires them to conform in even their personal life to the teachings of the faith of their school or else face possible dismissal, and all this without recourse to finding employment with an institution whose beliefs are compatible with their own. Finally, it discriminates against individuals who might wish to run for positions on school boards but cannot do so because their religious affiliations or non-affiliations do not accord with one of the enumerated Denominations. It does so in a manner which cannot objectively be called "fair" or "just". (p. 9)

On the other hand, there are also those who severely criticize the system because they claim it is expensive, inefficient and over-administered. Critics point to the duplication of schools and school resources, the relative absence of large-scale sharing, an imbalance with respect to curriculum materials, overlapping bus routes, and poor achievement levels. All this despite a large per-capita expenditure on education in relation to other provinces. Some of this sentiment is summed up by Harris (1990):

The plain fact is this: in the name of an antiquated, inefficient, and cast-ridden education system run by the churches but paid for by the public, Newfoundland children are being given substandard educations at the same time as they are preparing for a workplace more fiercely competitive than any the world has yet seen. (p. 3)

Defenders of the system point to the well-established partnership between church and state – one that has remained largely unchallenged for 115 years. Its legitimacy, proponents say, is therefore well established. They claim a public system would soon become a Godless institution without decent morals or any other human virtues, and devoid of Christian values. Some even go so far as to suggest that the presence of a public system would lead to increased crime, unemployment, promiscuity, illiteracy, delinquency, and alcoholism.¹

¹A number of briefs received by the Royal Commission laid before it such strong sentiments about the maintenance of the denominational system and the establishment of public schools. Specific comments about public schools included: "the students swear and take drugs", "teenage

Whatever their differences, however, all sides appear in agreement that a thorough accounting of the education system should be undertaken in order to discover what its exact cost is so that debate can move on to a higher plain, namely: "Are we prepared to pay for it?" Although House (1986) in the final report of the Royal Commission on Employment and Unemployment did not address the sensitive issue of the denominational educational system head-on, the education background report did recommend a detailed investigation of its cost be undertaken. It concluded:

...such a study would be highly desirable. The denominational system of education, as it is currently structured, allows for much inefficiency and unnecessary duplication of services. The denominational councils, for example, cost money to operate for an uncertain return; and, in rural areas particularly, more schools are operated than are needed for the school population. Newfoundlanders should know the costs of their denominational educational system and efforts should be made to use our scarce financial resources better in delivering educational programmes. (p. 145)

Previous Estimates

Over the years, a number of attempts have been made to estimate the cost of the denominational education system. But it is difficult to compare individual estimates because, for various reasons, different assumptions and methodologies were used, little attention was paid to detail, and different years were compared.

The Newfoundland Teachers' Association, in a 1986 brief to the provincial government entitled *Exploring New Pathways*, was first off the mark claiming the denominational educational system was

the most administratively inefficient and economically wasteful of any system in Canada ... The core of the problem is isolation by denomination. There is such a duplication of effort that we believe as much as one dollar in five is now used solely to support this isolation approach ... Consider that for 1985-86 the net education expenditure (current and capital) was \$387,287,200. If we are correct, as much as \$77,457,440 was spent during that school year to support isolated denominationalism. (p. 19)

Later that same year, in a letter of response to the Newfoundland Teachers' Association (October 23, 1986), Loyola Hearn, the Minister of Education at the time, claimed these estimates were "*patently ridiculous*". His methodology was founded on three assumptions: (1) a public system would still require 20 school boards, (2) there would be marginal savings relative to teachers' salaries, and (3) savings realized through the consolidation of schools would be offset to some degree by increased bussing costs. He concluded that the cost was more in the vicinity of \$10.5m, and with the introduction of a number of cost efficiency measures and greater sharing, this could be reduced by \$5m.

pregnancy, underage drinking and drug abuse are the norm", and "it is normal for teachers to have their feet upon the desk, smoking a cigarette, many times with a bad hang-over, and using curse words on the students where they didn't behave as they should, and at home practising common-law living."

In his book, *The Vexed Question* (1988), McKim undertook the most comprehensive exploration of the cost of the denominational education system. He went furthest in attempting to define costs and intangible benefits, although he stopped short of measuring them within the framework of a comprehensive provincial financial analysis. In the end, he simply dismissed the exercise saying it was not possible with available information to measure the cost. He admitted:

I have not been able to provide that much needed estimate of the total cost of denominationalism. That job requires the resources of a Royal Commission, and until one is appointed...we will never know the full extent of the cost and even then, we will only know the extent of the cost that can be quantified. (p.278)

Having said that, he went on to accept the Newfoundland Teachers' Association estimate of \$77.5m as being "not unreasonable". Categorizing the system as wasteful and inefficient, he pointed a finger clearly at the isolationism caused by the denominational education system.

One of the weakest empirical attempts to estimate the costs of the denominational system was completed by the St. John's Board of Trade in a brief to the Premier in November 1989. The Board accepted the findings and conclusions reached by the Newfoundland Teachers' Association based on the premise that 20 percent of all monies spent on education go to support the denominational system. They went on to estimate that the total cost of such duplication in 1989-90 was \$130.7 million. These findings, however, were based on the shaky assumption that, over time, the relative cost of the denominational system as a proportion of the total cost would remain constant. While the actual cost may vary from one year to the next, consolidation within and co-operation between boards has lowered the proportion of the total cost. If indeed the Newfoundland Teachers' Association was correct in its assumption that, for the school year 1985-86, 20 percent of the total cost went to maintain the denominational system, it is inappropriate to conclude that the same rate would be appropriate four years later.

In a 1990 article entitled "Educational Duplication Proves Costly", Peter Fenwick estimated the cost and found it to be somewhere between \$30 million and \$40 million. However, it is unclear to what year he referred or what methodology he employed.

There is probably some truth in each of the attempts described above. However, in each case the research methods employed were less than adequate. The conclusions reached were frequently based on incomplete data, inappropriate definitions and assumptions, and lack of a sound methodology which could lead to the identification, measurement and analysis of all the constituent elements. It was not the intention of this writer to dispute or verify any of these estimates, they were presented merely to demonstrate the degree of variance in the findings among those who have attempted to negotiate a most difficult path.

Methodology

The Task

It was within the context of this social, economic and political environment that government foresaw the need for education reform and thus the creation of this Royal Commission. At a news conference given by the Premier and Minister of Education to announce its creation, the Premier concluded:

"Over the past 20 years [there have been] growing concerns related to the effectiveness and cost-efficiency of the Province's school system....Government, therefore, feels that the time has come to undertake another comprehensive review of our delivery system to consider what structural changes may be necessary to reflect these new realities.

Realizing that critical decisions related to the organization and structure of the educational system could not be made without due attention to cost, Government mandated the Royal Commission to determine what those costs are. The Commission thus decided that one of its first tasks would be to undertake a comprehensive cost study – one which would address not only the costs associated with the denominational education system but the costs associated with further consolidation also. The specific mandates, as expressed in its Terms of Reference, were to

- #2 Examine the extent to which school districts and schools can be further consolidated and costs associated with such consolidation;
- #4 Examine the extent of duplication resulting from the denominational system and costs associated with such duplication.

Scope

Given its Terms of Reference, the Commission's task was to examine only those items which could be directly linked to (1) the maintenance of the denominational structure or to (2) inefficiencies resulting from duplication of effort. To accomplish this, a comprehensive analysis had to be completed at the school level, the central office level, and the provincial level. For each level, individual components had to be identified and justified, total costs (and in some cases per-unit costs) developed, and comparisons made against baseline data.

Given the magnitude of the problem under investigation, the study was intended only to be a snap-shot of the nature and extent of duplication and inefficiency for one period of time (1989-90). The limitations of the reliable data available, as well as time and resource constraints, would not allow for an analysis of the changing cost of the system over a period of time.

The investigation was also restricted to an analysis of expenditures. While a detailed analysis of revenue patterns would prove informative, 96 percent of revenue comes from direct grants (most of which are non-discretionary), and from local taxation and would not provide meaningful testimony about the real costs of the denominational system.

Conceptual Framework

The lack of adequate methodologies for undertaking a cost analysis of the Newfoundland education system has resulted in a wide variance in findings, but there has also been a lack of reliable data. In the past, studies have been designed with a macro-level approach, not paying particular attention to regional variances, local conditions or individual need. Given these circumstances, it became clear at an early stage that a new methodology for costing various components of the education system would have to be developed and tested. To estimate the savings such a framework would have to identify those components of the system which are directly connected to the maintenance of the denominational system, measure them, determine their costs, and re-calculate the cost of the system without them.

This methodology is derived from *cost-analysis* research. Although the basic principles of cost-analysis have prevailed for centuries, the formal application of various techniques for calculating effectiveness is a recent phenomenon. Although it takes many forms – cost-benefit analysis, cost-outcome analysis, cost-effectiveness analysis, cost-feasibility analysis – it is really any analytical method that measures the advantages and disadvantages of alternative actions, where one factor is cost. Stated another way, and as applied by the Commission, it is a form of public investment decision-making which, through the selective identification and examination of costs, assesses the fiscal desirability of existing rights, structures or hierarchy of power. Cost-analysis emanates from a desire for rational decision-making. It does not suggest either what people should do or should want; it merely informs and illuminates the decision-making process. The intent of this study was to help the Commission understand the implications of the present school system and to assess the ramifications of changing it.²

Although there are a number of different methods of evaluating actions, cost-analysis information is generally displayed in monetary terms. Within this framework, evaluation is based on efficiency criteria, implying that resources should be allocated to their highest valued uses. However, cost alone may not be the most important consideration for decision-makers who place a high value on other, non-financial elements, such as their proprietary rights, and they may thus choose to maintain a more costly system instead of more efficient alternatives which could somehow curtail those rights. Therefore, measuring the costs of the denominational system could not be confined to a process of identifying specific components and determining their costs.

Limitations

As with most studies of this nature, a number of limitations could not be controlled or compensated for, largely because of unavailability of data and the absence of prior research on several key elements. Another limitation was a lack of knowledge about specific components of the operation of the education system, such as the nature of busing routes, how some decisions are made within the system, and the roles and

²See, for example, M. Thompson, *Benefit-cost Analysis for Program Evaluation*, 1980; N. Smith, and J. Smith, *Cost Analysis in Educational Evaluation*, (ROEP Paper and Report Series No. 100), 1984; V. Smith, "A Conceptual Overview of the Foundations of Benefit-Cost Analysis", in J.D. Bentkover et al. (eds), *Benefits Assessment: The state of the art*, 1986; and A. Schmid, *Benefit-cost Analysis: A political economy approach*, 1989.

responsibilities of non-academic staff. In addition, the lack of a comprehensive knowledge about local political environments, particularly related to school consolidation, was a limiting factor.

Another limitation lay in the interpretation of certain key concepts, such as *cost*. While the concept of cost will be more explicitly defined later in this report, no attempt was made to deal with costs beyond those which could be measured: no acceptable way could be found to measure, for example, the cost of the volunteer effort provided by members of religious orders, the savings incurred through the use of certain church facilities, or the cost to disenfranchised individuals and groups of not having a direct voice in decision-making under the present system.

A further limitation was the inability to complete extensive primary research within time and budget allowed the Commission. Because of these constraints, the analysis was confined to one year (1989-90). Whether this particular year adequately represents the extent of duplication or inefficiency is not known. Decisions about school consolidation also had to be completed without the benefit of historical documentation and school level projections. On the capital side, for example, no attempt was made to examine the implications of long-term resource allocation based on denominational rather than provincial need. On the other hand, one can assume, with increased co-operation and sharing among boards over the last number of years, the percentage cost of the denominational system has been declining. As illustrated in Figure 1, it is unclear just where 1989-90 expenditures would fall on a cost curve over time.

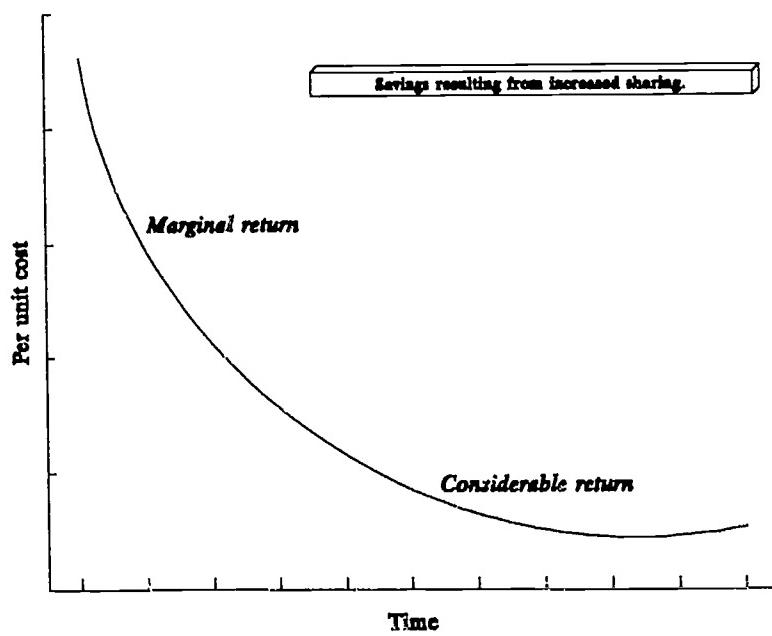


Figure 1. Consolidation and Co-operation in Education.

Again, because of time and costs, it was not possible to conduct all the basic research necessary to answer some of the questions that were raised, such as, "What has been the total extent of church input?", and "To what degree would church input

diminish if a denominational system no longer existed?" In addition, this cost analysis did not attempt to address the larger question of the worth of the denominational system.

These limits led the researchers, on a number of occasions, to use focus groups and interviews to assess the nature and sensitivity of key issues and how they relate to cost. The groups also provided needed background information where primary data were unavailable.

Description of Methods

The Commission thus had to take into account several factors, such as the kind of data available and the complexity of the system, in deciding on the most appropriate research methodology for providing reliable results and allowing for meaningful conclusions. The methodology adopted centred on the development of four distinct education system models or paradigms which could be assessed and compared.³ Each was a self-contained unit with all of the constituent parts necessary to facilitate comparisons between models. Each represented a mode of educational delivery and each was based upon generally accepted principles, selected operating assumptions and the conditions governed by these. Two of the models were developed within the framework of a denominational system — one reflecting the current status and the other reflecting an efficient, rationalized denominational system.

The remaining two models were developed outside the framework of a denominational system — one based on current organizational guidelines and the other based on efficiency and scale economies. The two "rational models" (B and D) deal with a number of sensitive issues. They raise questions about the characteristics of effective school districts, optimal school units, administrative efficiency and bus transportation. In no case were the legal, constitutional or political implications addressed.

The framework from which the four individual models were developed is illustrated in Figure 2, and the interrelationships between models is illustrated in Figure 3. A brief explanation of each model follows.

Model A This model represents the *status quo* and is based on the number of students, and the number and nature of school districts, schools, teacher allocations, and regulations and grants that were in existence for the 1989-90 school year. Model A serves as a baseline for Models B, C, and D.

Model B This scenario represents what the existing school system would look like and cost at a maximum level of consolidation and sharing among schools and school districts. Within this framework, the number of school boards would be reduced to minimal levels and schools would be consolidated based upon acceptable parameters for school size, reasonable conditions for student transportation, and demonstrated need. The *cost of*

³A model is a set of variables and relationships, the combination of which is used to describe or explain a problem. Because not all variables can be included nor all possible relationships hypothesized in any one model, a number of models is frequently required to address a complex problem or set of problems. In this case, the problem was not restricted to the costs associated with the denominational system. The study had to identify and measure costs associated with alternatives.

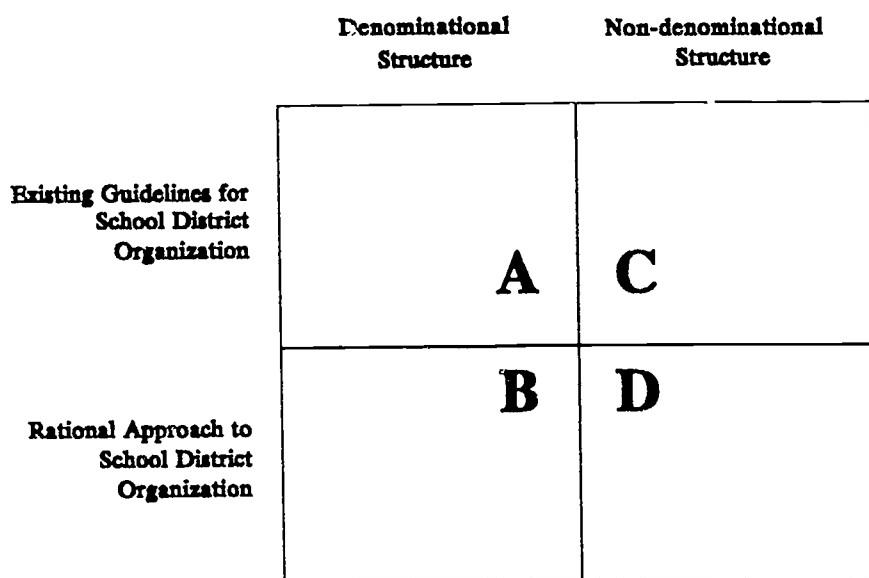


Figure 2. Framework for the Development of Individual Cost Models.

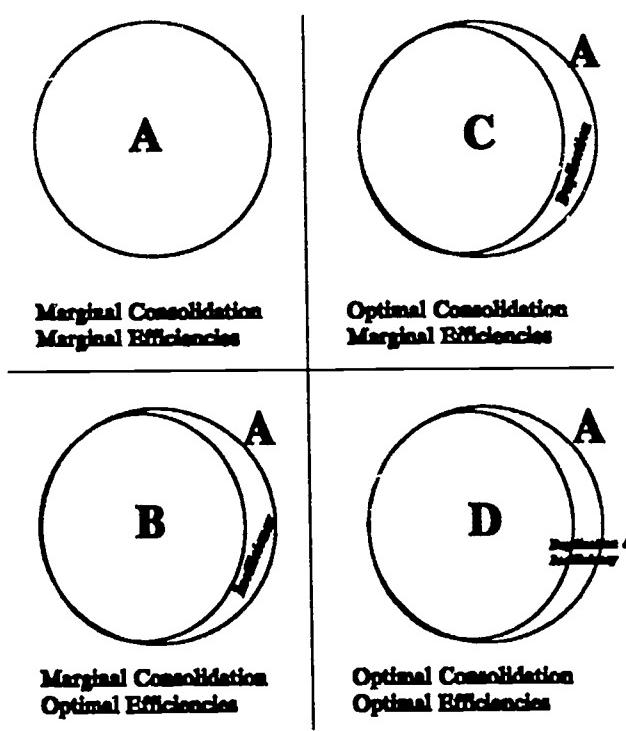


Figure 3. Interrelationships between Models.

inefficiencies within the denominational system was defined as the difference between Model A and Model B costs.

Model C This model represents what the education system would look like and cost if it were non-denominational but, in all other respects, structured and operated with the same level of efficiency as the present system (Model A). Within this framework, there would exist a single set of non-denominational boards paralleling the current guidelines for school district organization. The *cost of the maintenance of the denominational system* was defined as the difference between Model A and Model C costs.

Model D This scenario presents a picture of what Model C would look like and cost at a maximum level of consolidation and sharing among schools and school districts. Within this framework, there would also exist a single set of non-denominational boards reduced to minimal levels. In addition, schools would be consolidated, based upon acceptable parameters for school size, reasonable conditions for student transportation and demonstrated need. The *cost of denominational duplication within a rationalized structure* was defined as the difference between Model B and Model D costs.

The method used to establish individual models was based on a process involving a number of steps and leading to a comparison of costs. Some steps were performed identically in each model, while others required different procedures in different models. Further, some steps were judgemental in nature while others mechanically applied "rules". Those that were judgemental were based on solid background evidence, research findings, available data, and the conclusions of informed individuals. A summary of the steps required for determining the costs associated with Model B in relation to Model A is shown in Figure 4. This process was then repeated for the remaining models.

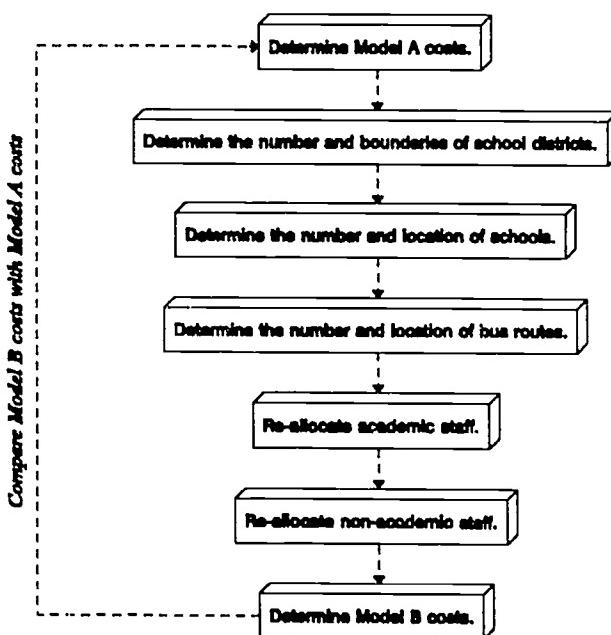


Figure 4. Steps Involved in the Costing of Model B.

While the steps may appear simple enough, each one is a labyrinth of information, determinants, constraints and judgments. Further examination will indicate the complexity of the process. The steps described above were broken down into supplementary steps which were further broken down into still other steps. This process was repeated for each model. Step #7 *Determine Costs*, for example, was further subdivided into school district costs, instructional costs, operations and maintenance costs, student transportation costs and other costs. Operations and maintenance costs were further separated by size of school, type of program, location, and number of students.

Unavoidably, because of measurement problems or a lack of unifying research, some steps introduced elements of subjectivity and uncertainty, and could therefore be open to challenge. In those cases, sensitivity analyses were performed allowing one set of assumptions to be varied while keeping the remainder constant and all other data at their given values. This was an invaluable tool, particularly when confronting thorny issues such as the formation of school district boundaries and school consolidation.

Data Sources

Main Data Sources

After examining the available data on school district and school organization, and on resource allocation and distribution, it was concluded, with some exceptions, that it would not be necessary or feasible to undertake a comprehensive province-wide survey encompassing all components of education finance or a longitudinal analysis to complete the investigation. A great deal of information was available from a number of different sources, but ways and means had to be found to integrate the available data from the most recent time period into a single dataset.

First, the existing data sources for the study were collected using a number of methods, then assembled and blended. The extensive resources of the Department of Education were drawn upon to supply data about all aspects of the system and how it is financed. A summary of the primary data sources retrieved from the Department of Education, the formats used, and the individuals associated with each is presented in Table 1.

Table 1. Summary of Data Sources, Department of Education.

Primary Database	Format	Source
1. School Board Financial Statements	Lotus	John Berniquez
2. AGR School-based Information System	dBASE	Jill Andrews
3. Teacher Pension/Payroll/Certification System	dBASE	Jill Andrews
4. Teacher Allocation System	Lotus	John Thompson
5. School/Community Distances	Lotus	John Humber
6. Bus Contracts/Distances/Costs	dBASE	Gerry Adams
7. Kindergarten Routes/Distances/Costs	dBASE	Gerry Adams
8. Demographics/Achievement/Staffing	SPSS	new/blended
9. School Characteristics/Consolidation	dBASE	new/blended

Many of these datasets were blended into new, larger databases to facilitate the macro-level analyses required for the study. In addition, because of different data formats and the nature of the analyses, three different computer programs had to be employed – a spreadsheet, a database management program and a statistical analysis package.⁴ Further complicating the analyses was the sheer size of the datasets, and the

⁴Lotus 123, dBASE IV and SPSS PC+.

effort that had to be expended developing and running the analyses required. Each school district required the construction of (a) computer files containing background information for later analysis, (b) files analyzing the schools under its custody, leading to decisions concerning consolidation, (c) files producing an intermediate analysis of the resource allocations (original schools), (d) files producing a final analysis of the resource allocations (consolidated schools), and files analyzing the 1989-90 financial returns based on new data. This procedure was then repeated for each of the school districts and this whole process was then repeated for each model. The sheer magnitude of creating, integrating, analyzing, filing and securing more than 500 files in several formats was a demanding exercise in itself.

Another data source was the use of expert panels, focus groups and semi-structured interviews. At a number of critical stages, decisions were made drawing not just upon the findings of related research but requiring the opinions, information and advice of individuals informed about and sensitive toward the education system, governance and local conditions. At the same time, it was considered essential to interview a number of individuals familiar with education finance and funding structures.

Supplementary Data Sources

A final source of information involved the collection of supplementary data. Several voids were identified which could not be filled by available data and which were of sufficient importance to warrant the development of new datasets. Two are worthy of brief mention at this point: (a) school operating costs, and (b) central office staff costs.

School Operating Costs. During the investigation, the need to collect reliable data on the cost of operating schools was seen as a priority. A survey of officials working with school boards was conducted to determine school costs for the 1989-90 school year, regional variances, school (type) variances, and district variances and to project part of the costs associated with school consolidation. Ten boards were thus surveyed and responses were received from nine of them ($n = 139$).

The purpose of the exercise was to understand the relationship between size and cost and predict the costs associated with consolidation. The variables analyzed were school size, total cost and per pupil cost. Trend analysis, using various regression (curve fitting) techniques, was completed to determine the predicted cost. Table 2 presents the predicted school operating costs categorized by school size.

Central Office Staff Costs. The need for reliable data on the cost of operating school district offices was also identified. A survey of 14 boards was conducted to discover the number and types of positions and the associated salaries. Results were compared with similar information collected for the 1989 Task Force on Education Finance.⁵ There were significant variances among central offices in the number of, and salaries paid to, business managers and various support staff. For example, with the exception of the Seventh-Day Adventist board, all boards had business managers, while some also had assistant business managers, office managers, and accountants. Differences were thus related, in large part, to the number of staff in the central office and the school board's budget.

⁵Supplied to the Commission by George Whey.

Table 2. Predicted School Operating Costs by School Size Category.

Size of School	Predicted Cost
<75	\$457
75-124	438
125-174	420
175-224	402
225-274	383
275+	365

Validation and Interpretation

Great pains were taken to ensure that both the research methodology and the data sources were valid. The methodology was also examined by and discussed with a number of authorities prominent in their fields and in a position to understand and advise as to its validity and authenticity.

Finally, a supplementary contract was commissioned with Ernst & Young, management consultants. M. Bleau, a principal with the firm's Toronto office, undertook a detailed analysis of the appropriateness and suitability of the methodology, data collection procedures and proposed analyses. This report was received December 10, 1990, allowing ample opportunity to review and implement the suggested changes.

Interpretation of Findings

One must be very careful in interpreting the findings of this study in relation to the limitations described earlier. For example, it is important to bear in mind that the findings represent one time period only and do not reflect the most recent efforts on the part of school boards to consolidate. A longitudinal study similar in nature to this one but focusing on changes over a number of years, would almost certainly find a trend toward sharing and inter-denominational co-operation. Because this study deals with one time interval, it is probably more appropriate to compare relative values rather than actual dollars when examining costs and savings.

2

CONTEXTUAL ISSUES IN EDUCATION FINANCE

Part II of this report establishes the framework for the study. It provides the context of how education is organized in Canada and in particular in this province and shows some of the trends and describes some of the problems unique to Newfoundland. It then sketches some of the issues typical in education finance, namely: principles, efficiencies, revenue generation, and resource allocation. It concludes by describing two of the most troublesome educational issues affected by finance programs - the organization of school districts and schools.

What is Education Finance?

Education finance refers to the process by which tax revenues and other resources are derived for the establishment and operation of schools, as well as the process by which those resources are allocated. It begins with major decisions about education, such as who will be educated, who will teach them, where they will be housed and how they will be taught. It then deals with such questions as how much money should be spent on education, how this money can best be raised, how the funds should be redistributed to provide the best education system for their value, and how to ensure the most efficient use of resources. While, in the past, decisions at this level went largely unchallenged, a much more educated population is demanding more input into educational decisions, and that government and other educational agencies be held more accountable than they have been.

The principles of education finance are deceptively simple. Funds to provide for the education of children are provided in a manner which ensures taxpayer equity. The education system must then provide all students, whatever their economic and social backgrounds or locations, with equal access to these resources. Finally, the education system must exhibit financial responsibility and accountability for all aspects of the educational process. These principles, however, fail to address a basic practical dilemma: how to ensure equal access to these resources while facing a critical scarcity of means. Whatever the available resources, there are always more demands than can

be satisfied.

The issue of productive use, or efficiency, thus permeates all other principles and aspects of the decision-making process. As stated by Levin (1989):

Different approaches to the provision of education and to determining where resources are used can also affect the productivity of resource use. Economically efficient use of resources within the educational sector requires that they be allocated to maximize educational outcomes. Even small losses in efficiency can waste billions of dollars in an educational sector ... not to mention the waste of student time and the other human costs. (p. 13)

Not always do these principles have a harmonious relationship with each other nor with the demands of efficiency. Frequently, educators must deal with conflicting principles before making critical decisions. For example, pressures by some groups to promote excellence are not always compatible with concurrent moves by other groups to embrace greater efficiency. Furthermore, the principle of student equity as described above is congruent with neither. Other dilemmas facing educators are to resolve conflicts between certain organizational and implementation principles. For example, the issue of decentralization, a recurrent theme in education, is closely – and inversely – linked with the principle of efficiency.

Financing Education in Canada

Effective and efficient education is of vital importance to all Canadians in that education is the means to greater social and economic health. Because of its high level of national importance, the education process might be expected to attract a great deal of federal intervention. In Canada, this is not the case. The *British North America Act* of 1867, and similar subsequent legislation, empowered the provinces with the responsibility for the provision of education. In this type of structure, educational needs are thus assessed provincially and programs are developed which reflect these needs. However, the federal government maintains educational responsibilities for Native Peoples, inmates of federal penal institutions, and members of the armed services and their dependents. Frequently, conditional arrangements are made between the federal and provincial governments to enhance the educational opportunities available to Canadian students.

Given the vast differences between regions in this country, it is not surprising that the provinces have each responded to the delivery of education in separate and distinct ways. Each province developed its own unique philosophy of education which has evolved into the largely discrete systems which are in place today. Alberta, Saskatchewan and Ontario are examples of systems maintaining both public and private schools. New Brunswick, Nova Scotia and Prince Edward Island have, by law, only secular public schools. However, informal agreements allow for the establishment of public schools set aside for Roman Catholics and Protestants and administered by a local authority. In some instances, these schools are staffed by teachers of the sponsoring religious denomination. Both Manitoba and British Columbia maintain secular public schools only; however, there are provisions for private schools to receive some public funds. Quebec and Newfoundland have the only publicly funded school systems set up along denominational lines. Quebec maintains both Roman Catholic and

Protestant boards, the latter serving other Christian denominations, Jews and other non-Christians. It also provides financial support to private schools. In many respects, its system of education mirrors its distinctive Francophone culture, a system which supports the existence of both English and Francophone schools.

The per-pupil expenditure on education varies greatly from province to province as well, reflecting the prevailing economic conditions, availability and price of goods and services, tax base and student population. Per-pupil school board expenditure in 1988 varied from a low of \$3,861 in Prince Edward Island to a high of \$5,389 in Quebec. British Columbia had the lowest expenditure per capita of the labour force (\$1,454) while Newfoundland had the highest (\$2,208).

As illustrated in Table 3, generally, school board revenues come from three primary sources: (1) provincial government grants, (2) local taxation (such as property taxes), and (3) other sources (e.g. federal grants, school-based fund-raising, rentals, etc.). Boards in two provinces receive substantial revenues through the collection of municipal contributions and one province through the levying of tuition fees. Various formulas and principles are employed throughout the country for the determination of provincial grant allocations to individual school districts, but most provide grants based on student enrolments as well as equalization grants and many special grants to address specific inequities.

Table 3. Sources of School Board Revenues by Province in Percentages, 1989-90.

	Provincial	School Taxes	Other Sources
Newfoundland	90.6	7.3	2.0
Prince Edward Island	99.6		0.4
Nova Scotia	80.8	16.4	2.7
New Brunswick	97.9		2.1
Quebec	90.9	4.9	4.2
Ontario	41.8	56.2	2.0
Manitoba	50.7	44.5	4.8
Saskatchewan	48.8	47.5	3.7
Alberta	53.2	41.7	5.1
British Columbia	63.6	31.1	5.3

Source: *A Statistical Portrait of Elementary and Secondary Education in Canada*, a joint publication of the Council of Ministers of Education, Canada and Statistics Canada, preliminary data.

Alberta, Prince Edward Island and New Brunswick require boards to submit budgets which are prioritized for capital disbursements, Ontario's basic per student grant is determined by the Average Daily Enrolment (ADE) of schools, while Nova Scotia has a rather complex method of weighted student units. Nevertheless, all of the provinces strive for a system of educational funding that is efficient, effective, equitable and which enhances local autonomy.

Financing Education in Newfoundland

Newfoundland education has been inextricably intertwined with the various churches since its beginnings some 250 years ago. Before government funding, the churches paid for all capital and operating costs of running the schools and were directly involved in their day-to-day operations. When the government finally became involved in educational matters, the churches exerted considerable influence over decisions about education funding and legislation. They had made a significant investment in the education system and through lobbying activities and political pressure maintained their direct role in administering the system while receiving public funding from the government.

With Confederation in 1949, church involvement in Newfoundland education was entrenched in Canadian law as well, when Term 17 of Newfoundland's Terms of Union with Canada preserved the churches' right to operate public denominational schools in the new province:

In lieu of Section 93 of the British North America Act, 1867, the following term shall apply in respect of the Province of Newfoundland:

In and for the Province of Newfoundland the Legislature shall have exclusive authority to make laws in relation to education, but the Legislature will not have authority to make laws prejudicially affecting any right or privilege with respect to denominational schools, common (amalgamated schools), or denominational colleges, that any class or classes of persons have by law in Newfoundland at the date of Union, and out of public funds of the Province of Newfoundland provided for education

a. all such schools shall receive their share of such funds in accordance with scales determined on a non-discriminatory basis from time to time by the Legislature for all schools then being conducted under authority of the Legislature; and .

b. all such colleges shall receive their share of any grant from time to time voted for all colleges then being conducted under authority of the Legislature, on a non-discriminatory basis.

In 1987, the Parliament of Canada, following approval by the Legislature of Newfoundland, renumbered the above-quoted text of Term 17 as sub-section (1) and enacted subsection (2) which extended to adherents of the Pentecostal faith in Newfoundland the same rights and privileges with respect to denominational schools and denominational colleges as were enjoyed by the classes of persons to whom sub-section (1) applied.

The final report of the Warren Royal Commission on Education was the catalyst for the 1969 reorganization of the education system when functional organization replaced the denominational structure at the Department of Education. Denominational Education Councils were created to fulfil a liaison role among the recognized Churches and with government. Five of the Protestant denominations integrated in order to provide a higher standard of education for their students. Warren's recommendations

drastically changed the profile of the system, reducing both the number of school boards and the number of individual schools in operation.

As the population expanded over the years, the number of multiple denomination communities increased considerably, so that it was not uncommon to see three small denominational schools representing each of the recognized denominations in a community with fewer than 100 students in total. However, during the past 25 years, the churches have made considerable efforts to reduce the incidence of such situations, and the number of schools decreased from 1,244 with 270 boards in 1960, to 543 schools under 32 boards in 1989-90 (the year under study).

Several other problems unique to the Newfoundland system seriously constrain the province's ability to provide equitable educational opportunities for all students. The geography, topography, and settlement patterns in this province have resulted in a large number of small, isolated schools. Only 10.5 percent of schools have 500 or more students, even with the consolidation that has taken place.

Demographic forecasts for the province indicate a number of significant future trends. As stated in Chapter 3, declining fertility rates and an extremely high level of out-migration will lead to further enrolment declines. Undoubtedly, this will lead to increased pressure on educational institutions.

School board operating funds now come from two main sources: government grants and local efforts. In 1989-90 government contributed 91 percent of the total cost of education through operating grants, teachers' salaries grants, maintenance grants, bus transportation grants, textbook subsidies, and other special purpose grants. School boards raised the remaining nine percent through a number of means, chiefly school taxes, and lesser amounts from school assessments, rentals, donations, school projects and other sources.

While operating grants are paid directly to school boards, capital grants are paid to the Denominational Councils and to the Seventh-Day Adventist Church authorities. The apportionment of funds is in the same ratio that the population of each Denominational Council bears to the total population of the province in accordance with the most recent census. Each Council then decides where money will be spent to build and improve its schools.

The evolution of public financing of elementary and secondary education in this province is as long and convoluted as its history, affected by demography, topography, geography, industry, culture, values and traditions and its unique denominational structures. The extreme population sparsity of this province, for instance, has affected the type of, and provision for, the system of education in this province in several ways. The existence of hundreds of small and isolated fishing communities scattered along the coast has meant not only an unusually large number of small schools but also sometimes insurmountable difficulties in providing in-service training, teacher travel, program co-ordinator visits and the retention of experienced teaching staff.

A recurring theme among public educators everywhere -- and this province is no

exception – is the accusation that all education systems are inadequately funded. To promote horizontal equity (equal money per student), the government of this province instituted equalization grants to compensate for revenue differentials resulting from less tax potential in small rural areas. However, these grants fail to recognize cost differentials that exist from region to region and, therefore, do not provide an equitable resolution to the problem of unequal local tax revenue.

Over the past 25 years, school boards have acquired a heavy burden of debt resulting from "the inadequate grants that school boards receive for the operations and maintenance of schools and the inability of the present capital grant to meet existing needs".⁶ In 1989-90, this debt stood at over \$41 million; however, the provincial government has been providing a special grant for the retirement of this debt and has recommended that school boards not borrow funds in excess of a ceiling amount determined by provincial authorities.

The problems associated with facilities, such as the replacement of obsolete buildings to accommodate new programs (especially at the junior high and senior high levels), improvements to make existing structures conform with health and safety standards, and the provision of accessibility for handicapped students, are areas of concern when financing the education system. The financial requirements for upgrading and replacing functionally and physically obsolete school facilities have been estimated to be well in excess of \$150,000,000. However, little research has been completed to validate this figure or to understand fully its implications and consequences.

If Newfoundland schools are to produce well-educated, socially adapted and emotionally prepared students, the education system will also have to adapt to the pressures experienced by today's students in order to meet their needs and society's need for an effective and efficient education system.

Principles of Education Finance

Since the responsibility for the provision of educational services has been legislated to the individual provinces, the financing of such services is implemented in a manner decided by each provincial government. However, recent developments in educational finance across the country have been aimed at achieving six principles commonly recognized in the educational finance literature as the standards against which educational finance plans ought to be assessed:

1. Every student in a province should have access to quality educational programs and services that reasonably respond to his or her individual needs, regardless of that student's interests and abilities, regardless of where that student lives, regardless of that student's cultural and socio-economic environment.
2. Every school board in a province should have access to sufficient revenues to

⁶Joint Denominational Education Council submission to the Task Force on Educational Finance, 1989.

provide quality educational programs and services that meet the needs of its students.

3. The plan of financial support should ensure reasonable equality for all taxpayers.
4. Within general provincial guidelines, the financing plan should provide maximum opportunity and encouragement for the development and exercise of local autonomy and leadership in education.
5. The financial provisions of a grant system should encourage sound and efficient organization, administration and operation of local school districts and schools.
6. The financing plan should emphasize continuous evaluation, long-range planning, and overall accountability for the expenditure of public funds.⁷

Local autonomy is directly related to the level of decentralization inherent in an education system. The personal nature of education necessitates that local conditions, characteristics and circumstances be considered in local educational decisions. Local autonomy is vital in an education system if local priorities and needs are to be effectively satisfied.

The extent of decentralization has a direct impact on financial planning activities. The government of this province, for example, currently provides funding for school projects in the form of either categorical or global grants. While global grants enhance autonomy, there are problems associated with them in the area of accountability. On the other hand, categorical grants tend to restrict local autonomy, but prioritized projects are ensured completion.

The central governmental bodies of each province are too distant from the mechanisms which distribute the service of education (the schools) to assess effectively the financial needs of these institutions. One alternative to such centralized decision-making is district-based budgeting, a concept whereby each school board creates its own budget and controls spending within its district. At the local level needs can be assessed effectively and provisions can be made to satisfy them. Some proponents of this concept would even advocate that budgeting should be the responsibility of each individual school, which would then be responsible for such things as personnel, equipment and maintenance. However, the logistic and administrative realities of such decentralization make the full implementation of school-based budgeting impractical.

Providing equal educational opportunity to all Canadian students is one of the biggest challenges facing governments and administrators today. Ensuring that every student, regardless of location, age, sex, religion, race and other considerations, is provided with equal funding, staff and services is the goal of *horizontal equity* theorists on the assumption that equality of educational inputs will lead to an equal opportunity for education. Provincial funding and, increasingly, foundation programs are used to facilitate equality of inputs. Thus, lower tax-generating regions are provided funds to

⁷Cited in C. Roebothan, P.J. Warren, and W. Dixon, *Financing Greater Equality and Excellence in the Newfoundland School System*, 1989.

bring them up to par with boards in higher tax districts. Some proponents of horizontal equity have suggested that provincial pooling of commercial assessments for redistribution would be a positive step towards equality. However, this solution jeopardizes the local autonomy of school districts and has, therefore, generally been considered an unacceptable alternative.

Whether the differences arise from different cultures, geographic locations, lifestyles, learning abilities, or physical or mental abilities, the fact is that all students are not equal when they enter school. *Vertical equity* theory thus proposes that since all students are different when they enter school, it will take different amounts of input to achieve an acceptable, standard level of output. Recognition of cost differentials and the use of weighting factors can be used to distribute more financial and personnel resources to schools and school boards where the needs are greater. By including and balancing both horizontal and vertical equity theory in funding formulae, financial administrators can provide an equal educational opportunity for their students as well as a fair tax burden for the taxpayers in their jurisdictions.

Economies of Scale vs Organizational Efficiency

Economies of scale are savings which come from cost reductions associated with large-size operations. In an education system such savings can be realized through volume discounts, use of excess capacity and allocation of fixed and capital costs over a larger student base. Economy of scale theory, by its nature, implies that – financially – bigger is better. Organizational efficiency, on the other hand, recognizes that bigger schools and school districts may not always perform as efficiently as smaller ones. Services to remote areas may be more efficiently delivered through small service centres.

Thus, there exists a conflict between economies of scale and organizational efficiencies. The basis of this dilemma lies in the existence of both monetary and non-monetary benefits in the education process. Economies of scale associated with larger schools and districts result in quantifiable, monetary savings but may also cause less apparent, yet nonetheless relevant, qualitative, non-monetary losses in efficient and effective education.

School Board Organization

The school board is the governing body given responsibility for the delivery of educational programs and services within a geographic region or for a particular group of citizens. During the school year 1989-90, the provincial school system was subdivided into 32 districts governed at the local or regional level by an elected school board. Of the 32 school boards, 18 were Integrated, 12 Roman Catholic, 1 Pentecostal and 1 Seventh Day Adventist. Districts range in size from 300 students under the

Seventh Day Adventist board to over 19,000 students under the Roman Catholic School Board for St. John's.

The Schools Act outlines the formal duties and powers of school boards in this province. Boards are ultimately responsible for the organization and administration of the means of primary, elementary and secondary education in their districts. To this end, boards provide teachers, other educational personnel, professional services, programs and adequate facilities for the operation of schools. They also develop policies and improve the partnership among home, school and church. Because denominationalism is a major factor in determining school districts' physical parameters, philosophy and functions, boards must follow not only the guidelines established in *The Schools Act*, but must also adhere to the doctrines and provisions of their respective denominational authority.

Every school board is structured as a corporation, with the general authority inherent in such a structure. General elections which take place every four years are the mechanism through which citizens (not fewer than 7 and no more than 18) are elected to positions as school board trustees. Each school board is responsible for hiring the professional staff (superintendent, assistant superintendents, business manager, secretarial support, program co-ordinators) necessary for fulfilment of its legal mandate. In the process of doing their work, school boards also purchase, acquire or dispose of lands and property, manage district debts, prepare an annual budget and audit, and assume responsibility for the insurance requirements of all their buildings and equipment. Boards are also responsible for the provision of school busing. Policy development and the mandate to enter into contracts and agreements with other school boards, agencies or community groups for the joint use of resources, such as school buildings or community arenas, are powers vested with school boards. Boards can also raise money and, when necessary, expel students.

Characteristics of Effective School Boards

In his report to the Commission, Treslan defines the local school district as "a geographical area of student population over which a governing body (the school board) makes decisions regarding both the purpose and direction of educational experience". In considering potential reorganization of the education system, the Commission considered a number of factors critical to the development of effective and efficient school districts. One of the key factors was size.

Size. The Commission found no evidence that district size is a significant factor in student achievement, the quality of services or cost effectiveness. Some make the case that larger districts have advantages because spending priorities can be shifted to more productive activities, that achievement is generally higher, and that better qualified teachers tend to be associated with larger school systems. In most cases, however, differences in achievement cannot be traced to differences in district size. When differences do exist, it is extremely difficult, if not impossible, to isolate a causal relationship between these variables when so many other factors affect student achievement.

It should be noted, however, that district size is not the only significant factor in

productivity differences among schools. In many respects, the province is too small to exploit the prevailing economies of scale. Other factors include

Area and Distance. The geographical area for which the board is responsible and the distance between schools within the district are features which have implications for the effectiveness of student transportation, in-service provision, and visits from district office personnel.

Access. Topography and settlement patterns have resulted in many communities that are remote, isolated and/or otherwise small. Many of these communities can only be reached by boat or plane and this fact contributes to the difficulty of providing educational services. Travel to these communities as well as the provision of district services is much more expensive than in communities which are more easily accessible. Therefore, the number of such communities in each district must be a factor when considering organization.

Orientation. The proximity to major service centres, where goods and services are readily available and frequently less expensive, provides resources and attractions for both staff and students.

Demographic Trends. Changing demographic patterns will be felt more severely in some areas of the province than in others. Rural school districts are hit the hardest by declining enrolments which will make it much more difficult to maintain viable educational services.

Climatic Conditions. The harsh winter climate of most areas of this province can result in problems for travel, student transportation, school buildings and facilities, and in extended periods of isolation.

School Organization

The school, through its principal, teachers and other educational personnel, is responsible for assessing and developing the educational potential of the children who have been entrusted to it. Educators must co-operate with parents to strive to ensure that children receive an appropriate education, develop a love of learning and acquire adequate preparation to meet the challenges of a rapidly changing nation and world. Within the current denominational education system in this province, the school is also responsible for strengthening the partnership among home, church and school through religious education classes, the example of teachers, maintaining an overall Christian atmosphere, and other faith-building activities.

Part IV of *The Schools Act* contains the legislative provisions for the operation of schools. In it, the principal of the school is responsible for instructional leadership; the provision of education that is consistent with the Act; assessment of and provision for students' needs; informing parents of students' progress and development; evaluation of and feedback about school programs; managing the school; promoting positive relations among the school, community and home; evaluating teachers; maintaining students' records; maintaining discipline and suspending students.

In conjunction with their principal, teachers also have obvious responsibilities in the education process. They must design, implement, supervise and assess educational programs; instruct, encourage and evaluate students' progress; maintain order and discipline; encourage the participation of parents in the child's education and maintain expected standards of education while teaching the course of study prescribed or approved under *The Schools Act*.

Characteristics of Effective Schools

School organization is contingent on many logistical, religious, economic, educational and social factors which combine to determine the location and enrolment of individual Newfoundland schools. Before evaluating the relative merits of various types of schools, one should be aware of the characteristics generally agreed upon as reflecting good, effective schools. A good or effective school is one which has high expectations for, and attainment of, academic achievement, while emphasizing academic basics. It provides for individualized instruction, and utilizes academic learning time effectively and efficiently in an orderly, supportive school climate. Respectful relationships among students, teachers and administrators are developed and maintained in order to deliver a healthy balance of activities fostering the intellectual, physical, emotional, social and spiritual development of students.

Effective schools also recognize and respond to the need for teachers to pursue learning opportunities and support individual initiatives and new approaches to learning. Feedback and evaluation tools are consistently and constantly employed by teachers as well as by a principal who provides instructional leadership for the school.

Important in the establishment of a good school is supportive home/school/community relations. Through the integration of these characteristics a clear mission can be developed for good, effective schools. In this regard, several characteristics are worthy of examination.

Achievement. The relationship between school size and achievement is significant, although it would be inappropriate to conclude that simply increasing school size will increase achievement levels. Most large schools are found in the large urban centres which have access to greater community resources and stimulative environments (human resources, facilities and Arts and Culture Centres, for example). Students in larger centres have an opportunity to see examples of the benefits of education, and see adults in many types of gainful employment. A significant variable related to achievement, though, has been found to be socio-economic status. Most recent studies have shown that when socio-economic status is controlled for, school size itself becomes an insignificant predictor of achievement. Areas which can support a well-educated, skilled workforce, especially the civil service and university, will have parents who are able to support their children's academic activities, provide them with materials, and, as well, set high expectations and serve as role models. Well-educated and relatively well-off parents are also much more likely to provide a stimulating pre-school environment and be able to contribute to good health by adequately meeting children's nutritional requirements.

Cost. Because of scale economies and the ability to introduce efficiencies, the per unit cost of operating small schools is higher than for larger ones. Focus group participants, brought together to discuss the issue of school size, held that it is more expensive to close small community schools and bus students to central locations. However, there is no data to support this notion. Further, the costs associated with consolidation are dependent on many factors, not the least of which is the social cost of underachievement.

Community/School Relationship. Parental and community support are key elements in school improvement programs. If children are bused out of a community, ties to the school are cut, parents have little opportunity to visit the school, the teachers are not seen regularly, and there is likely to be a greater separation between home and school for both parents and children. Current reform movements have recognized the value of the role of parents in education.

Program. Arguments in favour of large schools usually focus on the improvements to school curriculum and extra-curricular programs. Traditionally program considerations have been regarded as more important at the high school level where a significant depth of subject-area knowledge is required to teach most courses. At the primary and elementary levels this is less likely to be the case.

School Size

Although in the Newfoundland context discussions of optimal school size are often academic – the reality is that small, isolated communities must have their own schools regardless of their population⁸ – in many areas, small schools do exist side-by-side with other small schools. Indeed, this situation also exists in urban settings. The question then is whether the merits of these "optional" small schools outweigh the potential benefits that may be obtained through consolidation.

Based on the previously-stated characteristics of good schools, the relative merits of both small and large schools can be analyzed. For the purposes of this study, a school is considered *small* if it is exclusively a primary, elementary or junior high school with a mean grade enrolment of 12 or less, or, if it is a school where senior high school courses are provided, and the mean grade enrolment is 25 or less.⁹

Proponents of small schools have put forward strong arguments in favour of their existence. Small schools, they say, have a great level of school spirit and community involvement, and a better capacity to meet individual students' needs. Further, teachers in these schools become more involved in responding to students' academic and extra-

⁸Many of the small schools in Newfoundland are also located in isolated communities. If the students in these schools were to go to larger facilities, they would have to spend varying amounts of time each day commuting by bus. The 1988 Small Schools Study recommended that primary and elementary children not be bused any farther than 10 km from their communities and high school pupils no farther than 30 km.

⁹First derived by Riggs (1984) in his study of small schools and subsequently incorporated in the province's resource allocation program.

curricular needs. The research to date, however, has been largely inconclusive. Questions about what is a successful school, or what are the factors which affect school success, have yet to be adequately resolved. Much of the confusion arises because small schools tend to be in small communities and, as a result, enrolment tends to be a function of population density. Further, much of the research has been conducted in the United States where small schools tend to be larger (average size, 477) than those in this province (average size, 250).

In this province, while studies have revealed that student achievement is highly correlated with school size, it has also been shown that most larger schools are located in urban areas which have access to wider human, physical and cultural resources. Thus, it would be extremely difficult to prove a causal relationship between student achievement and school size.

The main conclusion reached after careful analysis of the available research, focus group responses, and interviews is that the school size debate is inconclusive. This is because school size is but one of many factors which affect educational outcomes and the quality of school life. In some circumstances school size may be the most significant factor affecting the learning environment or achievement, but it is not the only factor.

Maximum School Size

Although the literature on school size is inconclusive, to determine the extent of duplication and for the purposes of costing various components of the system, a maximum desirable school size had to be established. Results from focus groups and research activities demonstrated that there are maximum levels which a school should not exceed. Given the characteristics of good schools and the continuing debate regarding the relative merits of small and large schools, the following guidelines have been established:

Primary & Elementary School: For schools offering Kindergarten through Grade 6 (K-6) programs, two streams are considered most effective, with average class sizes not exceeding 30 students per grade per stream. Thus, a maximum enrolment of 420 students for a K-6 school is suggested.

Junior High School: Students in Grades 7-9 are progressing through a particularly difficult period in their personal and social development – adolescence. For administrators and teachers to be fully sensitive to these needs, three streams are considered most effective for junior high schools, with average class sizes not exceeding 30 students per grade per stream. Typically, junior high grades are combined with either elementary or secondary grades. Thus, an enrolment of 90 students for each grade in the junior high level is suggested as optimal.

High School: Newfoundland's high schools need to be large enough to offer a wide curriculum and a host of extra-curricular activities but still small enough to provide a good atmosphere for learning and a sense of belonging for students and staff. Thus, the range of 500-800 students is suggested as optimal, with an enrolment

ceiling of 900 students.

Despite these guidelines, it would be improper, impractical and insensitive for the Department of Education or any other provincial body to legislate minimum or maximum school size, as too many of the local factors described earlier come into play. School histories, traditional community rivalries, the role of the church and school reputations are just some of the many considerations which have influenced decision-makers in the past. Nevertheless, considerations related to the educational benefit for the students must take precedence over tangential local concerns and issues.

In any case, all parties to be affected by potential consolidation should have an opportunity to participate in the decision-making process: parents, students, teachers, principals, administrators, board members, board staff, town counsellors, and possibly other community groups and agencies. Others having expertise and interest in the education system as a whole would also have a role to play.

To conclude, so many factors come into play that the strengths and weaknesses of each school, whether small or large, must be treated independently. *Other things being equal, small schools generally do no better or worse than large schools – except that other things are almost never equal.*

3B

PRESENTATION AND INTERPRETATION OF DATA:

Denominational Paradigms

Chapter III of this report provides the findings of the two denominational models. Depicting the status quo, model A describes in detail the type of organization and structures which existed in 1990-91. The rational denominational model, while preserving the structures, controls and influence of the churches, estimates the potential for consolidation and streamlining.

MODEL A - The Existing Denominational System

To calculate the costs of the various components of the existing system of education, it was first necessary to establish a baseline to which the costs of other alternatives could be compared. Model A is this baseline and, unlike the other models, represents an actual situation – the Newfoundland school system as it was organized and managed for the school year 1989-90. Model A calculations therefore use the actual number of school districts and schools, resource allocations, and operational expenditures which were in effect during that school year. Its costs are also a reflection of the policies and practices, the level of sharing and co-operation between and among denominations, and the level of funding available at that time.

District Organization

In 1989-90, as today, there were four separate denominational jurisdictions in the province (Table 4). The integrated system incorporated 18 school boards, the Roman Catholic system 12 boards, and the Pentecostal and Seventh Day Adventist systems

each operated a single province-wide board. In total, there were 32 boards examined under Model A (see Figure 5 and 6). In 1960 there were 232 denominational school districts and another 38 boards for the administration of amalgamated schools, but the total number was reduced to 35 as a result of recommendations in the 1968 Royal Commission on Education. In the year under investigation, districts ranged in size from a small Seventh-Day Adventist school board operating seven schools for 301 students to a large urban Catholic board in St. John's operating 40 schools for almost 20,000 students. The average number of students served by a school board was 4,066.

Geography is a significant factor in the structure and organization of school districts. For some boards, the distances between the central office and some of its schools are enormous. For example, without factoring in indirect costs such as the inappropriate use of staff resources, a meeting between co-ordinators and teachers at an outlying school such as St. Joseph's All-grade in Croque, involving a two-day visit from central office in Corner Brook, generates a huge expense for the board. On the other hand, a similar assignment at a small urban board, such as Conception Bay South, would consume less than a half-hour travel time. The Pentecostal Assemblies School Board, which covers the entire province, utilizes two techniques to overcome the problems of geography: several regions of the province with large Pentecostal populations have resident program co-ordinators, and it utilizes school governing councils, to which considerable powers are delegated.

School Organization

For the year under investigation, there were 543 schools serving 130,109 students in approximately 302 communities. By and large, enrolment within each jurisdiction was limited to those of the same denomination. This was particularly evident among Roman Catholic districts which were composed of 92.8 percent Roman Catholic students. At the other extreme, almost 70 percent of the students enrolled in Seventh Day Adventist schools were not of that denomination. Of the total enrolment throughout Newfoundland, 3.2 percent was either unaffiliated with any of the founding denominations or professed no religion.

In addition to the publicly funded schools, there were six which were either private, separate native, institutional, or independent schools operated by the Department of Social Services. Together, these schools served some 600 students.

Table 4. Background Information by Denominational Constituency, 1989-90.

Background Data	Integrated	Roman	Pentecostal	Seventh Day	
	Boards	Catholic Boards	Assemblies Boards	Adventist Boards	Combined
School districts	18	12	1	1	32
Average school district size	4,060	4,180	6,560	301	4,066
Schools	312	181	43	7	543
Average school size	234	277	153	43	240
Total enrolment	73,084	50,164	6,560	301	130,109
Enrolment Change - Last 5 years ¹	-11.6%	-9.5%	-2.4%	-12.5%	-10.3%
- Next 5 years ¹	-12.4%	-11.2%	-9.4%	-12.3%	-11.8%
Special education non-integrated	585	386	31	0	1,002
Percent non-integrated	0.8%	0.8%	0.5%	0.0%	0.8%
French Immersion enrolment	2,002	1,978	0	0	3,980
% French Immersion	2.7%	3.9%	0.0%	0.0%	3.1%
Other denominations & no religion	13,863	3,612	1,171	210	4,183 ²
% other denominations & no religion	19.0%	7.2%	17.9%	69.8%	3.2%
Superintendents	19	12	1	-	32
Asst. superintendents	50	28	4	-	82
Program co-ordinators	142	87	9	1	239
Teachers	4,229	2,866	406	25	7,526
Total	4,440	2,993	420	26	7,879
Pupil/teacher ratio	17.3	17.5	16.2	12.0	17.3
Teacher/pupil ratio (tchs/1000 pupils)	57.9	57.1	61.9	83.1	57.8
Average age	38.8	39.7	37.4	43.7	39.1
Average years experience	15.0	16.0	13.4	13.7	15.3
Participation rate ³	79.2	73.9	69.0	28.6	76.6
Pass rate ⁴	78.7	81.7	81.1	76.9	79.8

Notes: ¹Press Toward 2000 (1990), most-likely projection. ²Percentage of the total enrolment not affiliated with either of the founding denominations or professing no religion. ³Grade 12 enrolment as a percent of Grade 8 enrolment 4 years earlier (not adjusted for migration). ⁴Total eligible graduates as a percent of total graduates.

Source: Department of Education, various databases.

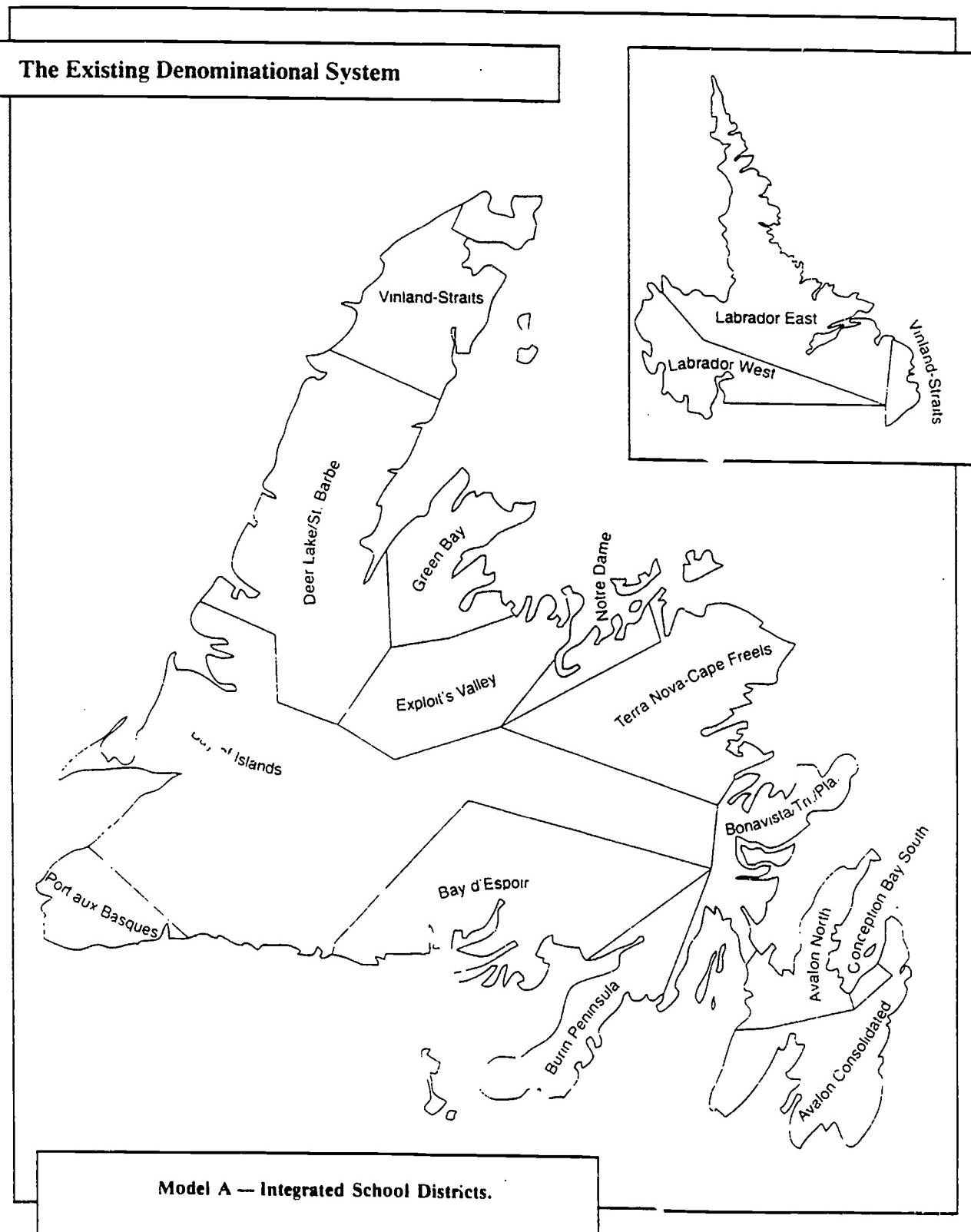
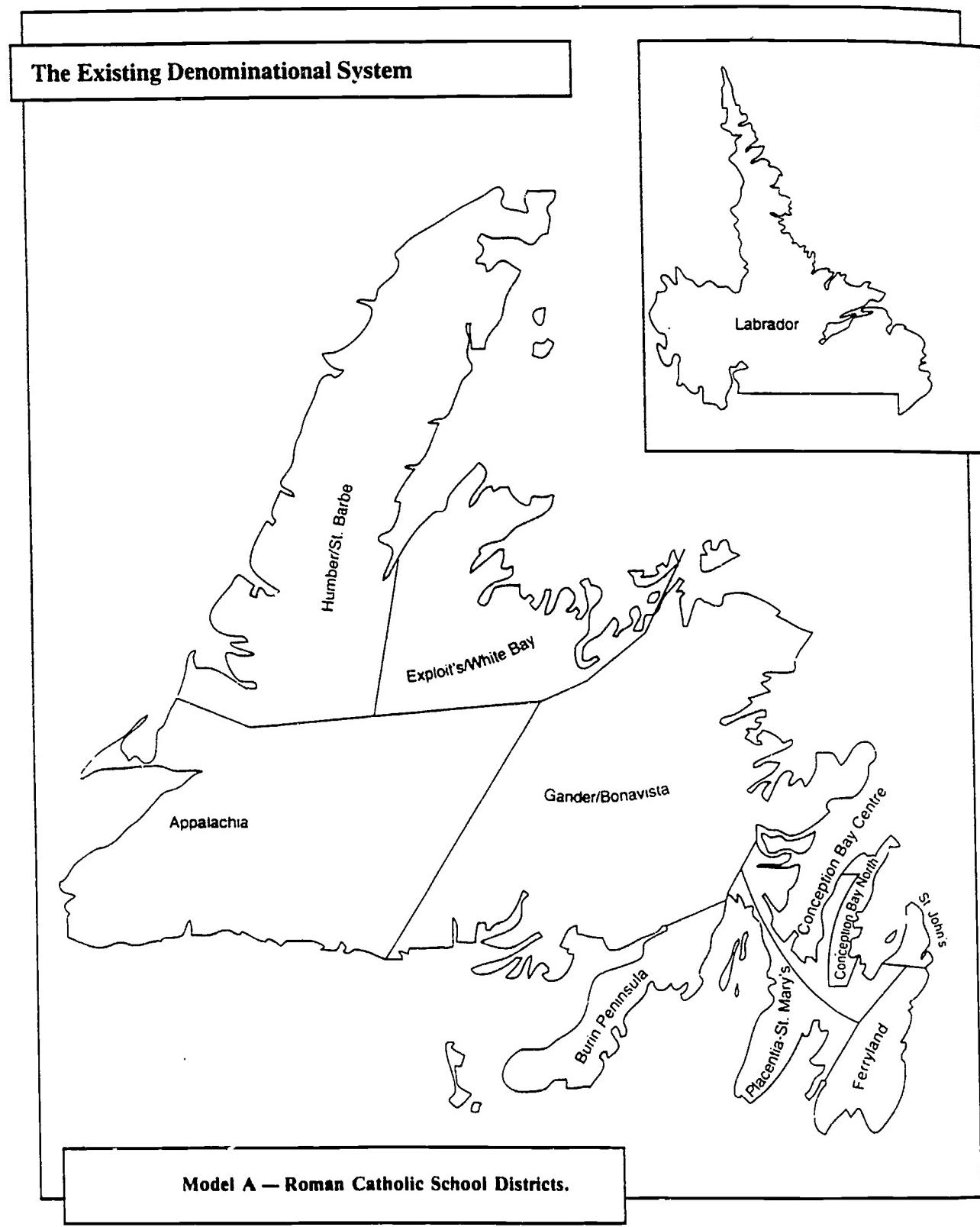
Figure 5

Figure 6



Further background information showing schools, teachers and enrolment by school district is presented in Table 5. Sixty percent of the school boards were rural in nature and approximately one-half of the students in the province were located in areas predominated by a rural lifestyle. Of the total students enrolled in schools, 16,621 attended 249 schools funded under the small school regulations, although, depending upon the definition used, it can be argued that the real number of small schools was far greater. Further, 883 students were funded under regulations pertaining to special education students, 1,120 pertaining to native students, and 234 pertaining to French first language students. Schools ranged in size from five students in Grades K-4 at Wiltondale to 1,195 in Grades 10-12 at Holy Heart High School, in St. John's. The average school size across the province was 240 students.

These schools were also set up under several grade arrangements, from elementary, to secondary, to all-grade, and every combination of school organization in between. Some high schools brought students in at the Grade 7 level, others at the Grade 9 level and others just offered senior high. Some communities were served by one denomination, others by a joint service arrangement, and others by several separate denominational schools.

The allocation of teaching and administrative units for Model A is presented in Table 6. Based on the existing policies in place at that time, there were 7,149 teachers, 377 principals and 353 central office staff. One teacher was allocated for every 23 students. Additional teaching units were allocated for students in small schools, for native and French language students, and for special services such as guidance, library resources and special education. The largest group other than classroom teachers was special education teachers. Additional central office personnel allocated for Vinland-Strait of Belle Isle, Deer Lake/St. Barbe South, Terra Nova-Cape Freels and Appalachia school boards were the result of the consolidation of boards which took place before the beginning of the 1990-91 school year.

Student Transportation

Student transportation is one of the major services provided to students in the province. It takes a significant share of the education budget, takes considerable time and commitment, and requires a great deal of energy from central office staff to secure an effective and efficient network. The provision of co-operative student transportation networks among boards has not always been possible because school districts either resist joint service arrangements, find them impractical, or cannot reach agreement with another jurisdiction.

At the time of the study, student transportation was administered through a number of different means throughout the province. Some boards owned their own fleet of buses, others contracted out for the service, and others co-operated with boards of a different denomination to provide a regional service. Of the 1,015 bus routes in the province, more than 400 were board owned and serviced, while the remainder were contracted through the public tendering process. Under the present system, boards that own their own fleet of buses receive 100 percent of the cost of running the service. All other boards contract private firms. These boards receive 90 percent of the cost of running that service. Placing the burden of financing the remaining 10 percent on these school boards is considered an incentive to economize and keep costs at a reasonable level.

With the exception of Fogo, Wabush, Labrador City, Happy Valley and Goose Bay (where any student may be bused between November 15 and April 15 each school

year), school boards were reimbursed for transporting students who resided more than 1.6 km (one mile) from the school they attended. Approximately 80,000 students got to school by bus, representing some 61.5 percent of the total students in the province. Factoring out students in St. John's, most of whom were ineligible because the St. John's Transportation Commission has the exclusive right to operate transportation services in the city, approximately 66 percent of the remaining eligible students in the province used school buses to get to school.

Table 5. Schools, Teachers and Enrolment by School District, June 30, 1990: Model A.

School District	Schools	Tchrs ¹	Total	%Rural	Small	%Small	T.P.R. ²
Vinland-Straits	32	247	3,637	100.0	1,457	40.1	72.1
Deer Lake	26	274	4,021	83.3	1,406	34.9	71.2
Green Bay Int.	23	203	3,161	100.0	973	30.8	67.4
Exploit's Valley	19	266	4,005	19.1	223	5.6	69.5
Notre Dame Int.	13	204	2,954	100.0	377	12.8	71.8
Terra Nova Int.	29	494	7,709	78.0	681	8.8	66.9
Bon/Tri/Pla Int.	21	353	6,255	100.0	854	13.7	59.1
Avalon North Int.	38	506	8,683	79.8	318	3.7	61.0
Avalon Consolidated	27	632	11,427	3.7	-	-	58.7
Burin Peninsula	14	199	3,239	100.0	424	13.1	64.5
Bay d'Espoir Int.	12	126	1,691	100.0	1,255	74.2	78.2
Port aux Basques	13	142	2,374	41.4	438	18.4	61.6
Bay of Islands Int.	19	379	6,320	26.1	608	9.6	62.1
Labrador East Int.	12	168	2,205	43.0	307	13.9	80.8
Labrador West Int.	5	115	1,923	0.0	-	-	61.1
Con. Bay South Int.	9	183	3,480	0.0	7	0.2	55.5
Burin Peninsula R.C.	14	255	4,060	85.1	1,230	30.3	65.5
Con. Bay Centre RC	8	97	1,665	100.0	-	-	60.4
Con. Bay North RC	11	146	2,444	54.5	286	11.7	62.2
Exploit's/White Bay	14	171	2,551	32.5	559	21.9	69.5
Ferryland RC	12	122	2,062	84.8	45	2.2	62.9
Gander/Bonavista RC	15	164	2,467	75.6	547	22.2	70.0
Humber/St. Barbe RC	21	243	4,016	39.3	611	15.2	63.5
Labrador RC	9	200	2,882	22.5	796	27.6	73.4
Pla.-St. Mary's RC	17	202	3,213	100.0	660	20.5	66.5
Appalachia RC	20	364	5,363	69.1	248	7.3	70.5
St. John's RC	40	1,044	19,441	3.2	-	-	56.7
Pentecostal	43	395	6,560	68.0	2,014	30.7	63.9
Seventh Day Adventist	7	26	301	8.3	206	68.4	89.7
Total Province	543	7,920	130,109	50.7	16,621	12.8	63.9

Notes: ¹Includes full-time and part-time. ²Teacher-pupil ratio (teachers per 1,000 pupils).

Source: Department of Education, *Education Statistics: Elementary-Secondary*, March 1990; and various databases.

Table 6. Academic Allocations by School District, Model A.

School District	School Staff						Central Office			Total Alloc					
	Basic	Guid.	Lib.	Small	Mean	Native	French	Spec Ed	Total	Prin.	Supt.	Asst.	Co-ord	Total	
1 Vinland Int.	72.1	1.7	11.8	4.0	0.0	0.0	12.4	103.7	4.5	1.0	2.0	7.0	10.0	118.2	
2 Strait of Belle Isle Int.	86.1	2.0	10.0	4.0	0.0	0.0	14.9	119.0	8.0	1.0	2.0	7.0	10.0	137.0	
3 Deer Lake/ St Barbe	174.9	4.0	21.1	4.0	0.0	0.0	28.9	237.0	13.5	2.0	4.0	14.0	20.0	270.5	
4 Green Bay Int.	137.5	3.2	14.6	4.0	0.0	0.0	23.7	186.1	10.5	1.0	2.0	7.0	10.0	206.6	
5 Exploits Valley Int.	174.2	4.0	3.3	0.0	0.0	0.0	28.0	213.6	12.5	1.0	2.0	7.0	10.0	236.1	
6 Notre Dame Int.	128.5	3.0	3.0	5.7	0.0	0.0	20.7	160.7	9.0	1.0	2.0	7.0	10.0	179.7	
7 Terra Nova Int.	271.2	6.2	6.2	5.2	0.0	0.0	43.7	332.6	17.0	1.0	4.0	8.0	13.0	362.6	
8 Cape Freels Int.	64.1	1.5	5.0	2.0	0.0	0.0	11.1	85.1	4.0	1.0	2.0	7.0	10.0	99.1	
9 Bon-Tri-Placentia Int.	272.1	6.3	6.3	12.8	0.0	0.0	43.8	341.2	17.0	1.0	4.0	8.0	13.0	371.2	
10 Avalon North Int.	377.7	8.7	8.7	4.8	0.0	0.0	60.8	460.6	24.5	1.0	5.0	10.0	16.0	501.1	
11 Avalon Consolidated	497.1	11.4	11.4	0.0	0.0	0.0	62.8	582.8	28.5	1.0	5.0	10.0	16.0	627.3	
12 Burin Peninsula Int.	140.9	3.2	3.2	6.4	0.0	0.0	22.7	176.4	10.0	1.0	2.0	7.0	10.0	196.4	
13 Bay D'Espoir Int.	73.6	1.7	18.8	4.0	0.0	0.0	12.7	112.4	5.5	1.0	2.0	7.0	10.0	127.9	
14 Port aux Basques Int.	103.3	2.4	6.6	2.0	0.0	0.0	17.8	134.4	7.0	1.0	2.0	7.0	10.0	151.4	
15 Bay of Islands Int.	274.9	6.3	6.3	9.1	0.0	0.0	44.2	340.9	18.5	1.0	4.0	8.0	13.0	372.4	
16 Labrador East Int.	95.9	2.2	2.2	4.6	2.0	25.2	0.0	16.5	148.7	7.0	1.0	2.0	7.0	10.0	165.7
17 Labrador West Int.	83.7	1.9	0.0	0.0	0.0	0.0	13.5	101.0	5.0	1.0	2.0	7.0	10.0	116.0	
18 Conception Bay South Int.	151.4	3.5	0.1	0.0	0.0	0.0	24.4	182.8	8.5	1.0	2.0	7.0	10.0	201.3	
19 Bay St. George RC	85.7	2.0	2.0	1.4	0.0	0.0	13.8	104.8	6.5	1.0	2.0	7.0	10.0	121.3	
20 Burin Peninsula RC	176.6	4.1	4.1	18.5	0.0	0.0	28.4	231.6	11.0	1.0	3.0	7.0	11.0	233.6	
21 Conception Bay Centre RC	72.4	1.7	1.7	0.0	0.0	0.0	11.7	87.4	5.5	1.0	2.0	7.0	10.0	102.9	
22 Conception Bay North RC	106.3	2.4	4.3	0.0	0.0	0.0	17.1	132.6	9.0	1.0	2.0	7.0	10.0	151.6	
23 Exploits-White Bay RC	111.0	2.6	2.6	8.4	2.0	0.0	19.1	145.6	8.0	1.0	2.0	7.0	10.0	163.6	
24 Ferryland RC	89.7	2.1	0.7	2.0	0.0	0.0	15.5	112.0	5.5	1.0	2.0	7.0	10.0	127.5	
25 Gander-Bonavista RC	107.3	2.5	8.2	2.0	0.0	0.0	18.5	141.0	9.0	1.0	2.0	7.0	10.0	160.0	
26 Humber-St. Barbe RC	174.7	4.0	9.2	2.0	0.0	0.0	30.1	224.0	12.0	1.0	2.0	7.0	10.0	246.0	
27 Labrador RC	125.4	2.9	11.9	0.0	17.4	2.4	20.2	183.0	8.5	1.0	2.0	7.0	10.0	201.5	
28 Placentia-St. Mary's RC	139.8	3.2	9.9	2.0	0.0	0.0	24.1	182.2	9.0	1.0	2.0	7.0	10.0	201.2	
29 Port au Port RC	147.6	3.4	3.7	0.0	0.0	7.0	23.8	188.9	10.0	1.0	2.0	7.0	10.0	208.9	
30 St. John's RC	845.7	19.4	0.0	0.0	0.0	0.0	106.9	991.5	47.0	1.0	5.0	10.0	16.0	1,054.4	
31 Pentecostal Assemblies	285.4	6.6	30.2	2.0	2.2	0.0	49.2	382.1	24.0	1.0	4.0	9.0	14.0	420.1	
32 Seventh-Day Adventist	13.1	0.3	3.1	4.0	0.0	0.0	2.3	23.0	1.5	0.0	0.0	1.0	1.0	25.5	
Total	5,659.8	130.1	130.1	249.3	42.0	44.8	9.4	883.1	7,148.6	377.0	32.0	82.0	239.0	353.0	7,878.5

Source: Department of Education, Teacher Allocation Database.

The total cost of transporting students was \$27.8 million or 5.7 percent of the total current account expenditure of the Department of Education. Of that amount, \$2.4 million was used to transport kindergarten students and \$1.7 million was used to transport handicapped students. The average route was 16.6 km in length and cost \$17,576 per contract.

Summary of Costs

In 1989-90, operating funds for school boards came from two sources. Direct grants from government accounted for 93 percent of the total cost. These included grants for the operations and maintenance of schools and central offices, teachers' salaries, student transportation, textbooks and other special services and programs. The remaining 7 percent was raised locally. The main source of local funds was direct school taxation, which accounted for \$27.5 million in 1989-90. Boards also raised money through local assessments, rentals and donations. Further, schools supplemented their operating costs through on-site fund raising such as chocolate bar sales, flea-markets, and walk-a-thons.

Operating grants were paid directly to school boards on a non-discriminatory basis, with each board receiving an equal per-pupil amount for the operation and maintenance of its schools. Other grants neutralize some of the inequities inherent in a per-pupil funding formula. One, for example, reimbursed those boards in which lighting and heating costs are higher than the provincial average. Another compensated school boards for school bus transportation costs above the provincial average transportation cost per pupil.

A summary of the operating expenditures is presented in Table 7. Because it is too cumbersome to show these numbers at the school district level, data are summarized by denominational jurisdiction. Additional analysis of the per-pupil expenditure by school district is presented later. Operating funds were disbursed under the following five general headings.

Administration expenditures. The operation and maintenance of central offices including the salaries and benefits of superintendents, business managers and other office support staff accounted for 3.5 percent (\$18.2 million) of the total education expenditure. Some would argue that, because of accounting practices, this figure is arbitrarily low because some central office staff (e.g. Assistant Superintendent, Administration) were accounted for under instruction rather than administration categories. Of the total administration expenditure, 69.6 percent was spent on salaries and benefits.

Instruction expenditures. These are the instructional costs of operating schools, including the salaries and benefits of assistant superintendents, program co-ordinators, principals, and teachers, and other costs associated with instruction such as materials and supplies, teacher in-service training, conferences and travel. The provision of instruction is the *raison d'être* of the education system, and it accounted for over 80 percent of the total cost. Of that amount, 96.8 percent was committed to salaries and benefits including (for some reason) those for school secretaries (\$5.6 million). Instructional materials such as textbooks, resource materials, library supplies and teaching aids accounted for 1.7 percent of the total education expenditure.

Operations and maintenance expenditures. The operation and maintenance of schools, including the salaries and benefits of janitorial and secretarial services, equipment, repairs, snow clearing, heat and light, and municipal services, cost just under 9 percent (\$45.6 million) of total expenditures. The two largest components were the salaries and benefits of janitorial and maintenance staff (\$20.3 million), and heat and light (\$12.8 million). Repairs and maintenance to buildings and equipment accounted for another \$6.5 million.

Pupil transportation expenditures. The costs associated with the operation and maintenance of a board owned fleet of buses or the cost of contracting such services accounted for 5.7 percent (\$29.4 million) of the total education expenditure. Over 43 percent (\$12.8 million) of that cost was used to operate and maintain board owned fleets and approximately \$2 million was committed for the transportation of students with special physical needs.

Other expenditures. Ancillary services such as teachers' residences and school cafeterias, and various interest expenses resulting from school construction, equipment purchase and vehicles consumed the remaining 1 percent of the total cost of education. The largest component (\$4.7 million) was committed to interest on monies borrowed, in particular, for school construction.

Per-pupil costs, broken down for each of the major expenditure areas, are presented in Table 8. Several points are worthy of note: (1) the low per-pupil cost of administration for the Avalon Consolidated board (\$85); (2) the high per-pupil cost of operating the Seventh-Day Adventist board (\$5,923), particularly to administer it (\$440); (3) the high costs for busing within the Notre Dame and Humber-St. Barbe boards; and (4) the high cost of operating and maintaining schools for the Avalon Consolidated board (\$405).

Table 7. School Board Expenditures by Denominational Jurisdiction, 1989-90.

Current Expenditures		Integrated Districts	Catholic Districts	Pentecostal District	SDA District	Total Province
51	Administration Expenditures					
11	Salaries & Wages (Gross)	6,541,060	4,528,088	521,213	84,977	11,675,338
12	Employee Benefits	526,946	401,184	46,392	12,222	986,744
13	Office Supplies	242,543	210,726	22,591	1,737	477,997
14	Office Furniture & Equipment	22,974	64,064	6,242		93,280
15	Postage	145,136	66,135	15,079	1,121	227,471
16	Telephone	377,084	251,075	20,795	4,538	653,492
17	Office Equipment Rentals and Repairs	243,316	150,356	20,116		413,788
18	Bank Charges	51,058	87,181	98	905	139,242
19	Electricity	187,454	68,624	3,062		259,140
21	Fuel	16,861	28,356	7,344		52,561
22	Insurance	19,120	42,990	300	122	62,532
23	Repairs & Maintenance (Office Building)	113,609	75,837	1,373		190,819
23	Travel	477,072	386,462	53,278	6,593	923,405
25	Board Meeting Expenses	127,037	133,782	28,050	1,206	290,075
26	Election Expenses	59,732	28,922	18,374		107,028
27	Professional Fees	255,582	135,207	12,912		403,701
28	Advertising	163,702	104,289	1,082	385	269,458
29	Membership Dues	170,252	137,614	15,627	125	323,618
31	Municipal Service Fees	7,197	3,209			10,406
32	Rental of Office Space	48,339	57,049			105,388
33	Relocation Expenses	26,300	7,799			41,061
34	Miscellaneous	241,455	248,745	3,881	4,364	498,445
48	Total Administration Expenditures	10,063,829	7,217,694	798,209	125,257	18,204,989

Instruction Expenditures			Integrated	Catholic	Pentecostal	SDA	Total
52	10	Instructional Salaries (Gross)					
11		Teachers' Salaries	- Regular	208,005,624	137,215,142	17,262,240	1,128,059
12			- Substitute	6,096,079	5,948,951	547,379	48,322
13			- Board Paid	866,832	730,565	41,124	12,640,731
14		Augmentation		730,173	569,827		1,638,521
15		Employee Benefits		11,183,414	8,955,087	1,534,881	21,673,382
16		School Secretaries	- Salaries	2,779,515	2,022,956	202,259	5,004,730
17			- Benefits	301,619	269,623	25,096	596,338
18		Other (Specify)		363,250	507,053		870,303
52	40	Instructional Materials		230,326,506	156,219,204	19,612,979	1,176,381
41		General Supplies		1,651,249	1,109,321	46,325	2,501
42		Library Resource Materials		864,876	474,676	65,061	3,974
43		Teaching Aids		1,706,537	1,289,951	210,681	35,361
44		Textbooks		620,026	477,032	95,549	2,161
52	60	Instructional Furniture & Equipment		4,842,688	3,350,980	417,616	43,997
61		Replacement		636,801	300,058	48,639	730
62		Rentals and Repairs		468,153	302,924	48,885	6,535
52	80	Instructional Staff Travel		1,104,954	602,982	97,524	7,265
81		Program Co-ordinators		418,382	244,733	41,215	704,330
82		Teachers' Travel		187,776	129,120	16,214	333,110
83		In-service and Conferences		448,351	238,022	60,442	13,907
52	90	Other Instructional Costs		1,054,509	611,875	117,871	13,907
91		Postage and Stationery		341,517	42,519	11,274	452
92		Miscellaneous		293,765	404,203	333	3,109
		Total Instructional Expenditures		635,282	446,722	11,607	3,561
				237,963,939	161,231,763	20,257,597	1,245,111
							420,698,410

Operations & Maintenance Expenditures - Schools			Integrated	Catholic	Pentecostal	SDA	Total
53	11	Salaries - Janitorial	7,610,952	6,384,005	564,285	39,957	14,599,199
12		- Maintenance	2,160,034	1,201,507	175,415		3,536,956
13		Employee Benefits	1,057,241	962,907	102,775	3,952	2,126,875
14		Electricity	5,348,279	3,621,795	487,732	34,535	9,492,341
15		Fuel	1,954,886	1,208,157	165,069	8,765	3,336,877
16		Municipal Service Fees	231,939	165,103	13,977	787	411,806
17		Telephone	731,153	460,667	81,620	6,199	1,279,639
18		Vehicle Operating and Travel	206,361	147,394	25,701		379,456
19		Janitorial Supplies	770,901	524,225	108,240	7,986	1,411,352
21		Janitorial Equipment	57,962	30,427	7,001		95,390
22		Repairs & Maintenance	3,637,409	1,908,153	779,775	11,674	6,337,011
23		- Buildings	151,576	3,597	2,094		157,267
24		- Equipment	711,554	260,894	8,287		980,735
24		Contracted Services	449,833	383,259	29,830	2,074	864,996
25		- Janitorial	15,022	447,566			462,588
25		Snow Clearing	17,196	94,339	500		112,035
26		Rentals					
27		Other (Specify)	25,112,298	17,803,995	2,552,301	115,929	45,584,523
Total Operations & Maintenance							

Pupil Transportation Expenditures			Integrated	Catholic	Pentecostal	SDA	Total
54	10	Operation & Maintenance of Board Owned Fleet					
11		Salaries - Administration	252,764	116,957			369,721
12		- Drivers and Mechanics	4,187,272	1,700,020			5,932,581
13		Employee Benefits	478,899	199,022			684,979
14		Debt Repayment - Interest	749,958	431,500			1,190,554
15		- Principal	912,456	532,163			1,458,070
16		Bank Charges	2,657	2,521			5,178
17		Gas and Oil	1,106,696	475,072			1,602,746
18		Licenses	92,033	36,181			129,241
19		Insurance	100,607	40,477			2,310
21		Repairs & Maintenance	542,536	242,210			804,809
22		- Fleet					
		- Building	24,445	9,480			33,925
23		Tires and Tubes	131,071	47,874			181,476
24		Heat and Light	41,268	20,561			61,829
25		Municipal Service	705	5,237			5,942
26		Snow Clearing	9,190	9,630			18,820
27		Office Supplies	17,362	4,350			21,712
29		Travel	18,067	5,607			23,674
31		Professional Fees	13,695	6,338			20,033
32		Miscellaneous	31,497	23,729			55,218
33		Telephone	15,930	6,255			22,185
34		Capital Expenditure Out of Current	23,238	0			23,238
			8,752,346	3,915,184			121,795
54	40	Contracted Services	8,098,340	5,904,553	739,509		14,742,402
41		Regular Transportation	77,887	1,046,916	39,958	251	1,865,012
42		Handicapped	8,876,227	6,951,469	779,467	251	16,607,414
			17,628,573	10,866,653	779,467	122,046	29,396,739
Total Pupil Transportation							

		Other Expenditures	Integrated	Catholic	Pentecostal	SDA	Total
55	10	Ancillary Services					
	11	Operation of Teachers' Residences	259,302	329,498	6,507		595,307
31		Cafeterias	174,502	22,660			197,162
32		Other (Specify)	205,022	0			205,022
56	10	Interest Expense	638,826	352,158	6,507	0	997,491
	12	Capital					
		School Construction	2,330,040	539,990	280,456	16,266	3,166,752
		Equipment	9,741	0			9,741
		Service Vehicles	2,107	515			2,622
		Other	35,389	21,632			87,414
	13	Current - Operating Loans	2,377,277	562,137	280,456	46,659	3,266,529
	14	- Supplier Interest Charges	128,523	1,292,364			1,420,887
		Total Interest Expense	19,065	25,239			44,304
	57	Miscellaneous Expenses	147,588	1,317,603	0	0	1,465,191
	57	10 Miscellaneous (Specify)	2,524,865	1,879,740	280,456	46,659	4,731,720
	57	11 Miscellaneous (Specify)	9,516	57,175			66,691
		Total Current Expenditures	293,941,846	199,409,178	24,674,537	1,655,002	519,680,563

Note: Some totals may not add due to rounding.

Table 8. Per-pupil Expenditures by Type of Service by School District, 1989-90.

School District	Admin.	Instr.	Operations	Trans.	Other	Total
1 Vinland Int.	199	2967	308	263	100	3837
2 Strait of Belle Isle Int.	158	3147	304	282	59	3950
3 Deer Lake/St. Barbe	124	2974	265	154	90	3607
4 Green Bay Int.	130	3063	247	337	69	3846
5 Exploits Valley Int.	135	3200	311	356	130	4132
6 Notre Dame Int.	128	3212	314	639	31	4324
7 Terra Nova Int.	105	2929	285	317	92	3728
8 Cape Freels Int.	166	2989	307	209	48	3719
9 Bon-Tri-Placentia Int.	115	2512	251	248	91	3217
10 Avalon North Int.	115	2864	274	204	48	3505
11 Avalon Consolidated	85	2795	405	114	134	3533
12 Burin Peninsula Int.	143	2952	250	231	160	3736
13 Bay D'Espoir Int.	189	3424	300	136	128	4177
14 Port aux Basques Int.	132	2621	288	183	14	3238
15 Bay of Islands Int.	78	2842	348	20	85	3373
16 Labrador East Int.	203	3815	431	320	74	4843
17 Labrador West Int.	226	3730	303	192	95	4546
18 Conception Bay South Int.	121	2745	249	181	28	3324
19 Bay St. George RC	162	3106	375	286	104	4033
20 Burin Peninsula RC	118	2802	292	229	52	3493
21 Conception Bay Centre RC	161	2911	322	266	25	3685
22 Conception Bay North RC	158	2952	312	245	1	3668
23 Exploits-White Bay RC	146	3095	351	22	20	3634
24 Ferryland RC	124	2958	335	268	61	3746
25 Gander-Bonavista RC	126	3049	306	145	38	3664
26 Humber-St. Barbe RC	115	2934	342	465	25	3881
27 Labrador RC	224	3792	353	246	197	4812
28 Placentia-St. Mary's RC	128	2986	299	223	31	3667
29 Port au Port RC	132	3175	305	197	27	3836
30 St. John's RC	97	2659	337	129	99	3321
31 Pentecostal Assemblies	103	2704	318	114	50	3289
32 SDA	440	4518	392	428	145	5923
Total	123	2924	318	209	78	3652

Source: Department of Education, Teacher Allocation Database.

MODEL B - A Rational Denominational System

Term 2 of the Commission's Terms of Reference required it to "examine the extent to which school districts and schools can be further consolidated and costs associated with such consolidation". There are two contexts under which consolidation could be examined, and the Commission considered both. The first context is the existing denominational system (considered in Model A) and the second is a context unconstrained by separate and independent denominational boards (Models C and D). This model examines consolidation within the first context, estimating the potential for consolidation within the denominational system and measuring the savings that could result.

To compare it with the existing system (Model A), Model B thus establishes an efficient, "slimmed-down" denominational system. In other words, it depicts what the existing system would look like and cost at a maximum level of consolidation and sharing among schools and school districts. Within this framework, the number of school boards would be reduced to minimum levels and schools would be consolidated, based upon acceptable parameters for school size, reasonable conditions for student transportation and demonstrated need. Model B, however, maintains the same denominational separation which exists under Model A.

District Organization

To determine the most efficient number of districts and their boundaries, several investigative strategies were employed. First was a review of research related to district organization, the findings of which were presented earlier. Second, specific reports on the reorganization of the local denominational systems were examined. Third, with assistance from expert panels, proposals on the number and boundaries of school districts were developed and finalized. Finally, sensitivity analyses were performed to help test and validate the findings and conclusions.

A comprehensive review of integrated school districts was completed by Roebothan and Warren in 1987. That report focused on the need for consolidation of specific school districts in the face of declining enrolments and spiralling operating costs. A number of the changes proposed in their report had already been acted upon at the time of this study, such as the consolidation of Deer Lake with St. Barbe South, Cape Freels with Terra Nova, and Strait of Belle Isle with Vinland. Other areas identified for re-examination at a later date included Labrador, Port aux Basques, Bay d'Espoir, Conception Bay South, and central Newfoundland.

One of the more forward looking studies was commissioned for the Catholic Education Council. Treslan (1988) revealed the need to alter the structure of the existing denominational system and replace it with a streamlined inter-denominational prototype. The report recommended 12 educational co-terminous regions with a dual

administration each containing separate, integrated and Roman Catholic districts. This report, however, was rejected by the Council and a second study was commissioned (Collins, 1989). Collins also suggested a number of changes, including the consideration of a model of systematic regional co-operation.

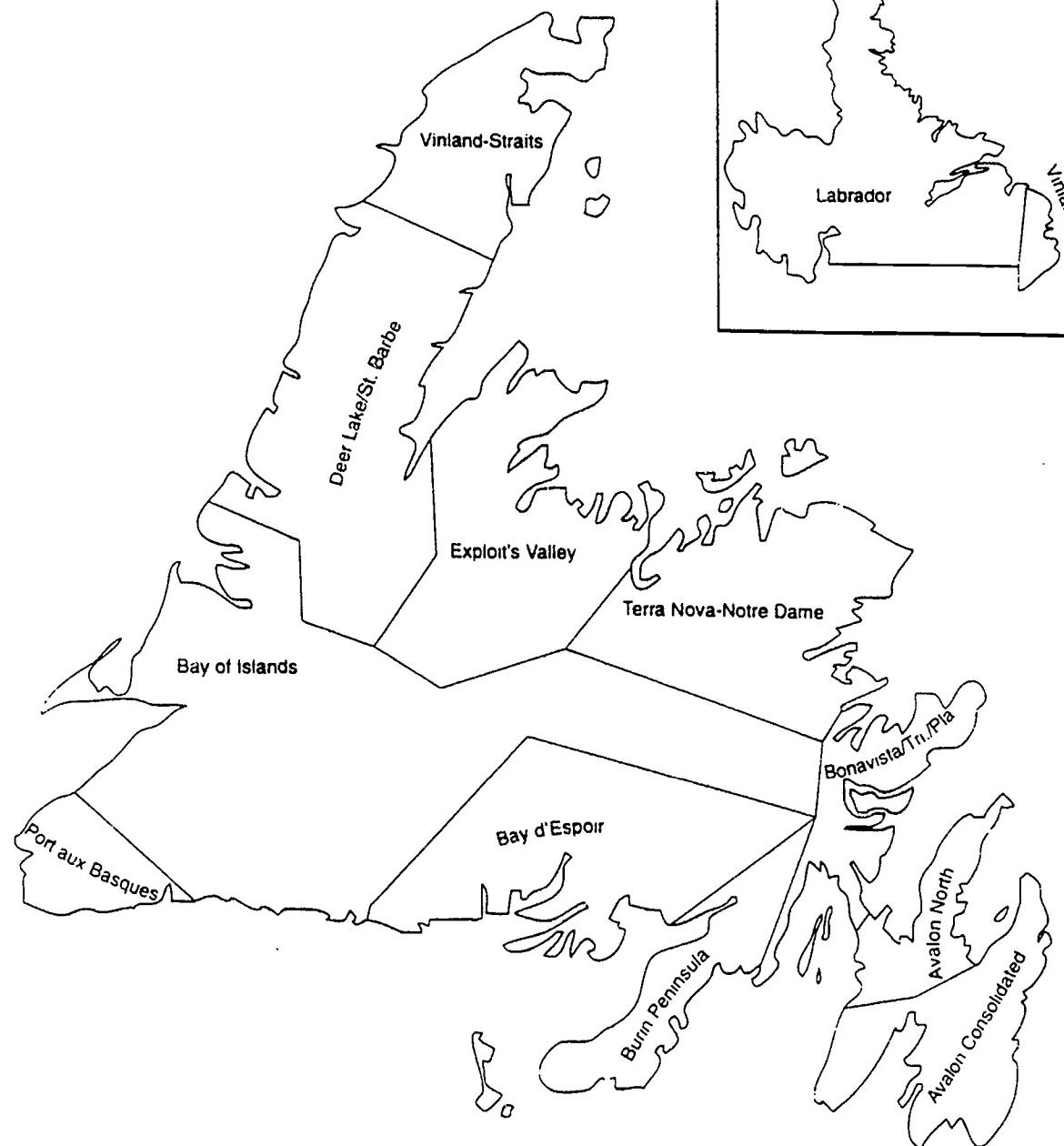
Verge (1989) in a study of the Pentecostal system also advocated a spirit of inter-denominational co-operation and innovative structural change. While the Pentecostal system with only one board cannot consolidate further, talks have taken place about the potential for expansion.

Based on the findings of these studies and its other research, Model B condenses the 29 districts in place at the end of the school year 1990 to 19 denominational districts. As a result, the integrated system is reduced from 16 to ten districts, the Roman Catholic system is reduced from 11 to seven and the Pentecostal and Seventh Day Adventist systems remain as they were (see Figure 7 and 8).

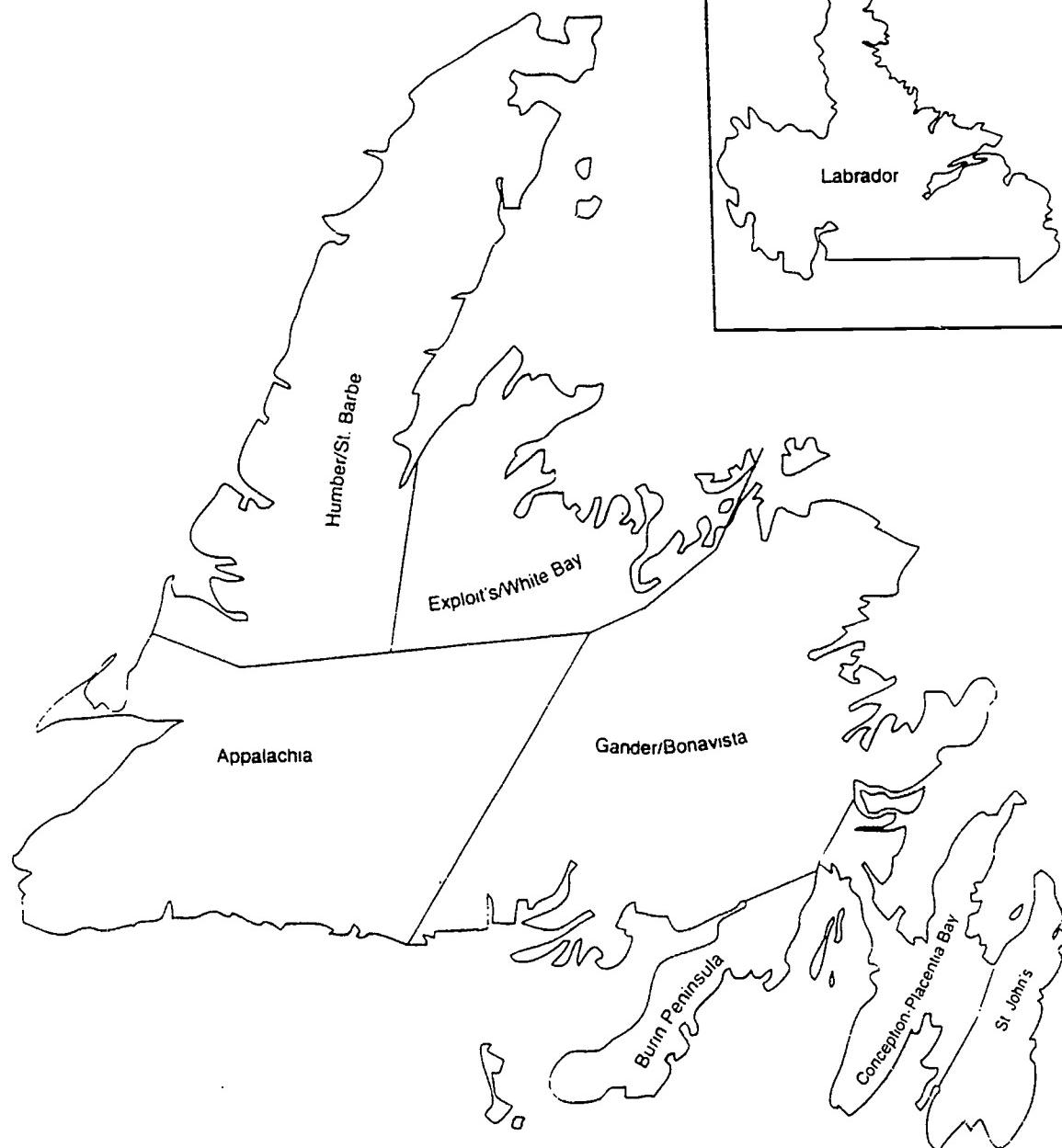
A complete list of the Model B districts along with the enrolment, schools, average school size and enrolment in small schools is presented in Table 9. All data are presented prior to any decisions regarding the consolidation of schools and the allocation of teaching units. Of particular note is the diversity in size among districts, ranging from 2,882 in Labrador Roman Catholic to 21,503 in St. John's Roman Catholic. The average district under this model has 6,848 students in 29 schools, and the average school size is just under 240 students. The Seventh-Day Adventist board has, on average, very small schools (43 students) with 68.4 percent of its students enrolled in provincially funded small schools.

School Organization

As with district consolidation, examination of the issue of school consolidation involved an extensive investigative process. First, the Commission undertook a review of research related to the factors critical to school success followed by an exhaustive consultation process in which focus groups were held throughout the province.

A Rational Denominational System**Model B — Integrated School Districts.**

A Rational Denominational System



Model B — Roman Catholic School Districts.

Table 9. Enrolment, Schools, Average School Size, and Small School Enrolment by School District, No Consolidation, Model B, 1989-90.

School Board	Enrolment	Schools	Avg. Size	Small Enrol.	Small %
Vinland-Straits Int.	3,637	32	113.7	1,457	40.1
Deer Lake-St. Barbe Int.	4,021	26	154.7	1,406	35.0
Exploits Valley Int.	8,857	54	164.0	2,451	27.7
Terra Nova-Notre Dame Int.	10,663	42	253.9	1,058	9.9
Bon-Tri-Placentia Int.	6,255	21	297.9	854	13.7
Avalon North Int.	8,683	38	228.5	318	3.7
Avalon Consolidated	14,907	36	414.1	7	0.0
Burin Peninsula Int.	3,239	14	231.4	424	13.1
Bay of Islands Int.	8,694	32	271.7	1,046	12.0
Labrador Int.	4,128	17	242.8	307	7.4
Pentecostal Assemblies	6,560	43	152.6	2,014	30.7
Burin Peninsula RC	4,060	14	290.0	1,230	30.3
Conception-Placentia Bay RC	7,322	36	203.4	946	12.9
Exploits-White Bay RC	5,018	29	173.0	1,106	22.0
Humber-St. Barbe RC	4,016	21	191.2	611	15.2
Labrador RC	2,882	9	320.2	796	27.6
Appalachia RC	5,363	20	268.2	339	6.3
St. John's RC	21,503	52	413.5	45	0.2
Seventh-Day Adventist	301	7	43.0	206	68.4
Provincial Average	6,848	29	239.6	875	376.3
Total	130,109	543	-	16,621	-

Second, with the assistance of expert panels, a set of criteria was established to guide the decision-making process, after which proposals on the number and location of schools were developed and finalized. Finally, sensitivity analyses were performed to help test and validate the findings and conclusions.

Measuring the potential for school consolidation required the establishment of a number of basic rules to guide the process: specifically, the conditions under which a given school would be consolidated with another. The establishment of these rules or criteria thus ensured that the decisions to consolidate schools in some areas but not in others were always objective.

As noted, these rules were derived only after an extensive literature review, and numerous focus groups and expert panels. From the beginning, it was clear that any set of rules would have to be derived from four essential considerations: size of school,

program requirements, distances between the core and fringe populations, and availability of alternative services. Consolidation would only be accepted if all conditions identified under the rules were met. Given these conditions, rules were formulated to guide the decision-making process (see Table 10).

Table 10. Criteria for the Further Consolidation of Schools within the Denominational System.

Consolidation of one school with another was considered:

1. if the schools being considered were of the same denominational constituency;
 2. if the schools being considered offered the same type of program (e.g. primary, high, all-grade);
 3. if, at the primary and elementary levels, there was no other similar school within 10 kms;
 4. at the secondary level, if there was no other similar school within 30 km;
 5. if the combined enrolments in both schools did not exceed the identified ceiling;
 6. for a primary or elementary school, if either had an enrolment less than 30 students per stream per grade and fewer than three streams (an enrolment ceiling of 420 students was adopted);
 7. for a junior high school, if either had an enrolment less than 30 students per stream per grade and fewer than four streams (an enrolment ceiling of 270 students was adopted); and
 8. for a senior high school, if either school was not of sufficient size to offer a wide and comprehensive curriculum and a complement of extra-curricular activities (an enrolment ceiling of 900 students was adopted).
-

Applying the rules was more problematic than establishing them. The greatest difficulties surrounded the unavailability of data to support the decisions and the lack of a sufficient understanding of the local political environment. Admittedly, some exceptions were made. This was particularly evident where three school consolidation was involved. In such cases, either of two scenarios could occur: (1) all three could be consolidated into one school, or (2) they could be reorganized into two more-efficient and effective schools.

Consolidation did not necessarily mean the elimination of one or more schools. In some cases it meant, for example, simple restructuring to introduce various scale economies or to accommodate a more effective means of resource allocation. It might mean, for instance, that an all-grade school would become an elementary school and the secondary students would be bused elsewhere.

Behind every decision was the realization that creative and innovative planning would be needed to safeguard the educational and social needs of all students. It should

also be noted that these decisions were made without the use of school-level projections; however, much of the macro-level work in this field (Press, 1990; Brown, 1991), points to a rapidly shrinking rural population. In summary, because of declining enrolments, much of the consolidation identified here will be inevitable at some future date, no matter what actions are taken as a result of this Commission's report.

Table 11 is a representation of what the various systems would look like after school consolidation. In this model, the total number of schools has been reduced by 32 from its original 543. The average school size has risen only marginally from 240 to 255 students.

Table 11. Background Information by Denominational Constituency, with Consolidations, Model B.¹

Background Data	Integrated Districts	Roman Catholic Districts	Pentecostal Assemblies District	Seventh Day Adventist District	Combined Model B
School districts	10	7	1	1	1 ^a
Average school district size	7,308	7,166	6,560	301	6,848
Schools	289	172	43	7	511
Average school size	253	292	153	43	255
Total enrolment	73,084	50,164	6,560	301	130,109
Percent total enrolment	56.2%	38.6%	5.0%	0.2%	100.0%
Superintendents	10	7	1	-	18
Asst. superintendents	39	22	4	-	65
Program co-ordinators	89	56	9	1	155
Teachers	4,188	2,846	406	25	7,465
Total Staff	4,326	2,931	420	26	7,703
Pupil/teacher ratio	17.5	17.6	16.2	12.3	17.4
Teacher/pupil ratio (tchs/1000 pupils)	57.3	56.7	61.9	81.4	57.4

^aBased on data for the 1989-90 school year.

The list of potential consolidations is presented in Table 12. It involves 31 sets of communities which match the rules and in which two or more schools could be consolidated. The 68 schools identified represent 31 of the most obvious cases where further consolidation should be considered. Since this was largely a hypothetical exercise, the specific schools which should be closed and those which should remain open were not identified, as that level of detail was not required. Actual decisions would have to be based upon the size, age and condition of the existing schools, location and growth of the population, social and economic viability of the communities involved, and many more factors. In some cases, neither school could logically accommodate the other and additional space would have to be made available.

While 511 schools would still remain open throughout the province it should be noted that this situation would continue only for the short term. Declining

enrolments will likely guarantee that an additional 50-100 schools will be forced to close their doors by the end of this century. The implications of these changes will be profound to say the least.

Table 13 presents the allocations for teachers, principals and central office personnel for Model B. Based on the same allocation policies used for Model A, this model shows a reduction of 172.6 staffing units. Under Model B, there are 7,096 teachers, 372 principals, and 238 central office staff. The greatest differences between Models A and B are the losses of 84 program co-ordinators and 17 assistant superintendents because of the consolidation of central offices. Of the teaching units lost, 26 are units under the *mean* allocation formula and 18 are small school units.

Student Transportation

Consolidation under a distinct denominational system could not happen without considerable cost. Disruption of teaching staff and families, increased work-load, less flexibility, and the loss of community identity and singularity are some of the potential negative effects. However, one of the most significant costs of consolidation is the increase in student transportation expenses. The majority of the consolidations identified involve two or more communities and this implies that considerable student busing would have to be introduced, nullifying at least some of the financial gains achieved.

Any future decisions to consolidate along denominational lines will thus inevitably be based on programs and other needs rather than financial expediency, and the financial arguments are least likely to hold up to public scrutiny. However, factors such as declining enrolments, loss of teaching units, dilution of programs, reduction of services, and poor achievement levels will lead to the inevitable debate over consolidation if other changes do not occur first.

Summary of Costs

Comparative expenditures by individual account items for both a sample district and for the province as a whole are presented in Table 8.11. The data are summarized for each of the denominational constituencies as well for the province under Models B and A. Showing individual boards would be misleading and, as a result, these have not been included. Comparison of both provincial summaries does provide a clear depiction of a rationalized denominational structure and the potential savings that could be achieved as a result.

Administration expenditures. The cost of operating and maintaining school board offices (\$16.5 million) accounts for 3.2 percent of the total education expenditure. Just under \$2 million savings were realized in this category compared to Model A. Most of this was accomplished through superintendents' salaries and certain economies of scale achieved through the closing of a number of buildings. Of the total administration expenditure, 68.8 percent went on salaries and benefits.

Instruction expenditures. The provision of instruction (\$415.6 million) accounts for 81.0 percent of the total cost, an increase of 1.2 percent of the total over Model A. Of the total amount 96.8 percent would be committed to salaries and benefits, and 2.1 percent would be spent on instructional materials such as textbooks, resource materials, library supplies and teaching aids. Over \$5.4 million in savings in instructional salaries

are identified, most of which was for central office personnel.

Operations and maintenance expenditures. Almost 4 percent (\$1.7 million) savings could be achieved through the consolidation of schools. Of that amount, approximately \$800,000 would be saved through salaries and the remainder through the closure of buildings. The two largest components are the salaries and benefits of janitorial and maintenance staff (\$19.5 million), and heat and light (\$12.4 million). Repairs and maintenance to buildings and equipment account for another \$6.3 million.

Pupil transportation expenditures. While other budget items decrease, the cost of student transportation increases under Model B. Compared to Model A (\$29.4 million), the cost of busing increases by \$1.6 million (5.6 percent). While the consolidation of schools within the denominational system does provide some gains, especially through salaries, significant gains are achieved only in selected regions. While consolidation within the denominational system leads to overall savings when looking at all the costs associated with the operation of schools, the area of student transportation remains problematic.

Other expenditures. The remaining one percent of the total cost of education, spent on various ancillary services and interest expenses, is not affected by the model and no savings are achieved. The largest component (\$3.3 million), committed to interest on capital, would still exist under this model.

Table 12. Examples of Communities for Which Consolidation along Denominational Lines Is Recommended.

Denomination	Community	School	Gds	No.
1. Integrated	Arnold's Cove	St. Michael's	K-12	317
	Sunnyside	R. K. Gardner	K-12	213
2. Integrated	Badger's Quay	Bishop Meaden	K-7	214
	Wesleyville	Wesleyville Mem	K-7	202
	Newtown	Newtown Primary	K-3	32
3. Integrated	Bay de Verde	Tricon Elem	K-6	151
	Old Perlican	John Hoskins Mem	K-6	140
4. Integrated	Bonavista	Cabot Collegiate	8-12	418
	Catalina	T. A. Lench Mem	9-12	226
5. Integrated	Carboncar	Carbonear Coll	7-12	410
	Victoria	Persalvic C.H.	8-12	240
6. Integrated	Catalina	Catalina Elem	K-8	267
	Little Catalina	L. Catalina Elem	K-5	49
7. Integrated	Clarke's Beach	Clarke's Beach Elem	K-9	235
	Brigus	Brigus Academy	K-9	183
8. Integrated	Bay Roberts	Amalgamated Elem	K-9	212
	Shearstown	St. Mark's Elem	K-9	328
9. Integrated	Dark Cove	Smallwood Aca	9-12	263
	Glovertown	Glovertown R.H.	7-12	359
10. Integrated	Englee	Englee Elem	K-8	140
	Bide Arm	Robert's Elem	K-3	14
	Roddickton	Roddickton Elem	K-6	93
11. Integrated	Forteau	Forteau Elem	K-6	87
	Lanse au Clair	St. Andrew's Elem	K-3	19
12. Integrated	Grand Bank	John Burke R.H.	7-12	440
	Fortune	Fortune Coll	9-12	203
13. Integrated	Hermitage	John Watkins Aca	K-12	206
	Seal Cove	John Loveless Mem	K-12	104
14. Integrated	Lewisporte	Lewisporte R.H.	7-12	461
	Campbellton	Greenwood C.H.	7-12	219
15. Integrated	Lower Cove	Green Island Elem	K-6	121
	Flower's Cove	Straits Elem	K-6	188
16. Integrated	Raleigh	Pistolet Bay	K-9	72
	Ship Cove	Ship Cove Elem	K-6	28
17. Integrated	Musgrave Harbour	Gill Memorial Aca	K-12	374
	Lumsden	Lumsden School	K-12	254
18. Integrated	Norman's Cove	Holy Trinity C.H.	7-12	292
	Whitbourne	Whitbourne C.H.	9-12	119

19. Integrated	Triton Pilley's Island	B. Peckford Elem Blackmore Elem	K-6 K-3	127 49
20. Integrated	Trout River Woody Point	Jakeman C.H. Bonne Bay C.H.	8-12 7-12	61 78
21. Integrated	Bishop's Falls Grand Falls Windsor	Inglis Mem High Grand Falls Aca Windsor Coll	7-12 9-12 7-12	260 348 356
22. Integrated	Winterton Hant's Harbour	Perlwin Elem Hant's Harbour	K-7 K-6	167 70
23. Roman Catholic	Bishop's Falls Norris Arm	Leo Burke Aca Carmel Coll	K-12 K-12	357 126
24. Roman Catholic	Castors River N. Castors River S.	Our Lady Mt. Carmel Our Lady of the Angels	K-3 K-3	31 13
25. Roman Catholic	Corner Brook Curling	Regina High Cabrini High	9-12 7-12	578 215
26. Roman Catholic	Harbour Grace Carbonear	St. Francis C.H. St. Clare's C.H.	7-12 7-12	279 251
27. Roman Catholic	Harbour Main Avondale	St. Joseph's Elem Assumption Elem	K-6 K-6	172 111
28. Roman Catholic	Lamaline Lawn	St. Joseph's Aca Holy Name of Mary	K-12 K-12	399 302
29. Roman Catholic	Marystown Burin	Marystown C.H. Berney Mem High	7-12 7-12	667 232
30. Roman Catholic	Stephenville Crossing St. George's	Assumption C.H. St. Joseph's C.H.	8-12 6-12	268 342
31. Roman Catholic	Witless Bay Tors Cove Bay Bulls	St. Bernard's Sacred Heart St. Patrick's	K-6 K-6 K-6	174 49 134

Table 13. Academic Allocations by School District, Model B.

School District	School Staff										Central Office Staff				
	Basic	Guid.	Lib.	Small	Mean	Native	French	Spec Ed	Total	Prin.	Supt.	Asst.	Co-ord.	Total	Alloc.
Vinland-Straits Int.	138.2	3.6	3.6	18.0	4.0	0.0	0.0	27.3	214.8	12.0	1	2	7	10	236.8
Deer Lake-St. Barbe int.	174.9	4.0	4.0	19.1	2.0	0.0	0.0	30.2	234.2	13.0	1	3	7	11	258.2
Exploits Valley Int.	385.3	8.9	8.9	36.8	2.0	0.0	0.0	66.4	508.2	28.0	1	5	10	16	552.2
Terra Nova-Notre Dame Int.	463.8	10.7	10.7	15.4	0.0	0.0	0.0	74.6	575.2	29.5	1	5	10	16	620.7
Bon-Tri-Placentia Int.	272.1	6.3	6.3	4.1	0.0	0.0	0.0	43.8	332.5	17.0	1	4	8	13	362.5
Avalon North Int.	377.7	8.7	8.7	3.7	0.0	0.0	0.0	61.4	460.2	23.5	1	5	10	16	499.7
Avalon Consolidated	648.5	14.9	14.9	0.1	0.0	0.0	0.0	82.5	760.9	37.0	1	5	10	16	813.9
Burin Peninsula Int.	140.9	3.2	3.2	6.4	0.0	0.0	0.0	22.7	176.4	10.0	1	2	7	10	196.4
Bay of Islands Int.	378.2	8.7	8.7	15.7	0.0	0.0	0.0	61.4	472.7	25.5	1	5	13	19	517.2
Labrador Int.	179.6	4.1	4.1	4.6	0.0	25.2	0.0	28.9	246.5	12.0	1	3	7	11	269.5
Pentecostal Assemblies	285.4	6.6	6.6	30.2	2.0	2.2	0.0	49.2	382.1	24.0	1	4	9	14	420.1
Burin Peninsula RC	176.6	4.1	4.1	18.5	0.0	0.0	0.0	28.4	231.6	10.5	1	3	7	11	253.1
Conception-Placentia Bay RC	318.5	7.3	7.3	14.2	0.0	0.0	0.0	51.7	399.0	23.0	1	4	9	14	436.0
Exploits-White Bay RC	218.3	5.0	14.7	2.0	0.0	0.0	0.0	37.7	282.7	16.5	1	3	8	12	311.2
Humber-St. Barbe RC	174.7	4.0	4.0	9.2	0.0	0.0	0.0	28.6	220.5	11.5	1	2	7	10	242.0
Labrador RC	125.4	2.9	2.9	11.9	0.0	17.4	2.4	20.2	183.1	8.5	1	2	7	10	201.6
Appalachia RC	233.3	5.4	5.4	5.1	0.0	0.0	7.0	37.8	293.9	16.0	1	3	8	12	321.9
St. John's RC	935.4	21.5	21.5	0.7	0.0	0.0	0.0	119.8	1,098.9	52.5	1	5	10	16	1,167.4
Seventh-Day Adventist	13.1	0.3	0.3	3.1	4.0	0.0	0.0	2.3	23.0	1.5	0	0	1	1	25.5
Total	5,659.7	130.1	130.1	231.4	16.0	44.8	9.4	874.9	7,096.4	371.5	18	65	155	238	7,705.9

71

70

Table 14. School Board Expenditures by Denominational Jurisdiction, Models B and A.

	Current Expenditures	Integrated	Catholic	Pentecostal	SDA	Model A	Model B	B-A
Administration Expenditures								
51	11 Salaries & Wages (Gross)	6,263,014	4,432,991	567,605	97,199	11,675,338	10,475,472	(1,199,866)
12	Employee Benefits					986,744	885,337	(101,407)
13	Office Supplies	213,540	185,788	22,991	1,737	477,997	454,097	(23,900)
14	Office Furniture & Equipment	19,553	57,700	6,242	0	93,280	88,616	(4,664)
15	Postage	125,665	57,810	15,079	1,121	227,471	216,097	(11,374)
16	Telephone	284,160	183,382	20,795	4,538	653,492	620,817	(32,675)
17	Office Equipment Rentals and Repairs	210,178	133,918	20,116	0	413,788	413,788	0
18	Bank Charges	43,974	73,180	98	905	139,242	139,242	0
19	Electricity	144,755	45,631	3,062	0	259,140	246,183	(12,957)
21	Fuel	16,861	28,356	7,344	0	52,561	49,933	(2,628)
22	Insurance	19,120	42,990	300	122	62,532	59,405	(3,127)
23	Repairs & Maintenance (Office Building)	97,883	67,216	1,373	0	190,819	181,278	(9,541)
23	Travel	366,052	281,366	53,278	6,593	923,405	831,065	(92,341)
25	Board Meeting Expenses	89,874	102,401	28,050	1,206	290,075	261,068	(29,008)
26	Election Expenses	59,732	28,922	18,374	0	107,028	107,028	0
27	Professional Fees	210,899	92,607	12,912	0	403,701	322,961	(80,740)
28	Advertising	126,966	77,809	1,082	385	269,458	242,512	(26,946)
29	Membership Dues	170,252	137,614	15,627	125	323,618	258,894	(64,724)
31	Municipal Service Fees	7,197	3,209	0	0	10,406	10,406	0
32	Rental of Office Space	48,339	57,049	0	0	105,388	94,849	(10,539)
33	Relocation Expenses	26,300	7,799	0	6,962	41,061	123,183	82,122
34	Miscellaneous	216,999	210,154	3,881	4,364	498,445	435,398	(63,047)
	Total Administration Expenditures	8,761,313	6,307,891	798,209	125,257	18,204,989	16,517,630	(1,687,359)

		Instruction Expenditures	Integrated	Catholic	Pentecostal	SDA	Model A	Model B	B-A
52	10	Instructional Salaries (Gross)							
11	Tch.'s' Sal/Benefits - Reg	215,884,838	144,013,629	18,797,121	1,128,059	385284447	379,823,647	(5,460,800)	
12	- Substitute	6,096,079	5,948,951	547,379	48,322	12,640,731	13,272,768	632,037	
13	- Board Paid	866,832	730,565	41,124	0	1,638,521	1,638,521	0	
14	Augmentation	730,173	569,827	0	0	1,300,000	1,300,000	0	
15	Employee Benefits				0		0	0	
16	School Secretaries - Salaries	2,779,515	2,022,956	202,259	0	5,004,730	4,754,494	(250,237)	
17	- Benefits	301,619	269,623	25,096	0	596,338	596,338	0	
18	Other (Specify)	363,250	507,053	0	0	870,303	870,303	0	
		227,022,306	154,062,604	19,612,979	1,176,381	407,335,070	402,256,070	(5,079,000)	
52	40	Instructional Materials							
41	General Supplies	1,741,393	1,109,321	46,325	2,501	2,809,396	2,949,866	140,470	
42	Library Resource Materials	774,732	474,676	65,061	3,974	1,408,587	1,479,016	70,429	
43	Teaching Aids	1,706,537	1,289,951	210,681	35,361	3,242,530	3,242,530	0	
44	Textbooks	620,026	477,032	95,549	2,161	1,194,768	1,194,768	0	
		4,842,688	3,350,980	417,616	43,997	8,655,281	8,866,180	210,899	
52	60	Instructional Furniture & Equipment							
61	Replacement	636,801	300,058	48,639	736	986,228	986,228	0	
62	Rentals and Repairs	468,153	302,924	48,885	6,535	826,497	826,497	0	
		1,104,954	602,982	97,524	7,265	1,812,725	1,812,725	0	
52	80	Instructional Staff Travel							
81	Program Co-ordinators	267,882	143,233	41,215	0	704,330	535,500	(168,830)	
82	Teachers' Travel	186,978	128,742	16,214	0	333,110	319,786	(13,324)	
83	In-service and Conferences	442,523	234,450	60,442	13,907	760,722	730,293	(30,429)	
		897,383	506,425	117,871	13,907	1,798,162	1,585,579	(212,533)	
52	90	Other Instructional Costs							
91	Postage and Stationery	341,517	42,519	11,274	452	395,762	379,932	(15,830)	
92	Miscellaneous	293,765	404,203	333	3,109	701,410	729,466	28,056	
		635,282	446,722	11,607	3,561	1,097,172	1,109,398	12,226	
	Total Instructional Expenditures	234,502,613	158,969,713	20,257,597	1,245,111	420,698,410	415,629,952	(5,068,458)	

		School Operations & Maintenance	Integrated	Catholic	Pentecostal	SDA	Model A	Model B	B-A
53	11	Salaries - Janitorial	7,689,103	5,527,239	817,417	37,128	14,599,199	14,070,887	(528,312)
	12	- Maintenance	1,862,843	1,339,087	198,036	8,995	3,536,956	3,408,961	(127,995)
13		Employee Benefits	1,120,182	805,232	119,085	5,409	2,126,875	2,049,908	(76,967)
14		Electricity	4,999,424	3,593,789	531,481	24,141	9,492,341	9,148,834	(343,507)
15		Fuel	1,757,466	1,263,338	186,833	8,486	3,336,877	3,216,123	(120,754)
16		Municipal Service Fees	216,890	155,909	23,057	1,047	411,806	396,904	(14,902)
17		Telephone	673,960	484,470	71,648	3,254	1,279,639	1,233,332	(46,307)
18		Vehicle Operating and Travel	199,852	143,662	21,246	965	379,456	365,724	(13,732)
19		Janitorial Supplies	743,331	534,336	79,022	3,589	1,411,352	1,360,278	(51,074)
21		Janitorial Equipment	50,240	36,115	5,341	243	95,390	91,938	(3,452)
22		Repairs & Maintenance	3,337,575	2,399,185	354,813	16,116	6,337,011	6,107,689	(229,322)
23		- Equipment	82,829	59,541	8,805	400	157,267	151,576	(5,691)
24		Contracted Services	516,533	371,305	54,912	2,494	980,735	945,244	(35,491)
25		Snow Clearing	455,576	327,486	48,432	2,200	864,996	833,694	(31,302)
26		Rentals	243,636	175,135	25,901	1,176	462,588	445,848	(16,740)
27		Other (Specify)	59,007	42,416	6,273	285	112,035	107,981	(4,054)
		Total Operations & Maintenance	24,008,446	17,258,245	2,552,301	115,929	45,584,523	43,934,921	(1,649,602)

76

77

		Pupil Transportation Expenditures	Integrated	Catholic	Pentecostal	SDA	Model A	Model B	B-A
54	10	Operation & Maintenance of Board Owned Fleet	236,677	142,332	9,803	1,535	369,721	390,346	20,625
11		Salaries - Administration							
12		- Drivers and Mechanics	3,797,737	2,283,867	157,305	24,630	5,932,581	6,263,539	330,958
13		Employee Benefits	438,489	263,696	18,163	2,844	684,979	723,192	38,213
14		Debt Repayment - Interest	762,132	458,328	31,568	4,943	1,190,554	1,256,971	66,417
15		- Principal	933,382	561,313	38,661	6,053	1,458,070	1,539,411	81,341
16		Bank Charges	3,315	1,993	137	21	5,178	5,467	289
17		Gas and Oil	1,025,997	617,009	42,497	6,654	1,602,746	1,692,157	89,411
18		Licenses	82,734	49,754	3,427	537	129,241	136,451	7,210
19		Insurance	91,794	55,202	3,802	595	143,394	151,393	7,999
21		Maintenance - Fleet	515,198	309,827	21,340	3,341	804,809	849,706	44,897
22		- Building	21,717	13,060	900	141	33,925	35,818	1,893
23		Tires and Tubes	116,172	69,863	4,812	753	181,476	191,600	10,124
24		Heat and Light	39,580	23,802	1,639	257	61,829	65,278	3,449
25		Municipal Service	3,804	2,287	158	25	5,942	6,273	331
26		Snow Clearing	12,048	7,245	499	78	18,820	19,870	1,050
27		Office Supplies	13,899	8,358	576	90	21,712	22,923	1,211
28		Rent	0	0	0	0	0	0	0
29		Travel	15,155	9,114	628	98	23,674	24,995	1,321
31		Professional Fees	12,824	7,712	531	83	20,033	21,151	1,118
32		Miscellaneous	35,348	21,257	1,464	229	55,218	58,298	3,080
33		Telephone	14,202	8,541	588	92	22,185	23,423	1,238
34		Capital Expenditure Out of Current	14,876	8,946	616	96	23,238	24,534	1,296
			8,187,076	4,923,508	339,114	53,097	12,789,325	13,502,796	713,471
54	40	Contracted Services							
41		Regular Transportation	9,437,336	5,675,385	390,901	61,206	14,742,402	15,564,828	822,426
42		Handicapped	1,193,886	717,974	49,452	7,743	1,865,012	1,969,054	104,042
		Total Pupil Transportation	10,631,222	6,393,359	440,353	68,949	16,607,414	17,533,882	926,468
			18,818,298	11,316,867	779,467	122,046	29,396,739	31,036,678	1,639,939

		Other Expenditures	Integrated	Catholic	Pentecostal	SDA	Model A	Model B	A-B
55	10	Ancillary Services							
	11	Operation of Teachers' Residences	259,302	329,498	6,507	0	595,307	595,307	0
	31	Cafeterias	174,502	22,660	0	0	197,162	197,162	0
	32	Other (Specify)	205,022	0	0	0	205,022	205,022	0
			638,826	352,158	6,507	0	997,491	997,491	0
56	10	Interest Expenses							
	12	Capital							
		School Construction	2,330,040	539,990	280,456	16,266	3,166,752	3,166,752	0
		Equipment	9,741	0	0	0	9,741	9,741	0
		Service Vehicles	2,107	515	0	0	2,622	2,622	0
		Other	35,389	21,632	0	30,393	87,414	87,414	0
			2,377,277	562,137	280,456	46,659	3,266,529	3,266,529	0
	13	Current - Operating Loans	128,523	1,292,364	0	0	1,420,887	1,420,887	0
	14	- Supplier Interest Charges	19,065	25,239	0	0	44,304	44,304	0
			147,588	1,317,603	0	0	1,465,191	1,465,191	0
		Total Interest Expense	2,524,865	1,879,740	280,456	46,659	4,731,720	4,731,720	0
57	10	Miscellaneous Expenses							
	57	11 Miscellaneous (Specify)	586,300	57,175	0	0	66,691	66,691	0
		Total Current Expenditures	289,840,661	196,141,789	24,674,537	1,655,002	519,680,563	512,915,083	(6,765,480)

Note: Some totals may not add due to rounding.

4

PRESENTATION AND INTERPRETATION OF DATA:

Non-denominational Paradigms

Chapter IV of this report provides the findings of the two non-denominational models. Model C is based on the philosophy, principles, and organizational efficiencies of the denominational system as it existed in 1990-91. The rational non-denominational model (model D), in dealing with sensitive issues such as school district organization, optimal school units, administrative efficiency, and student transportation, examines the potential for maximum consolidation and economies of scale.

Model C - A Non-denominational System

As a direct response to Term 4 of the Commission's mandate, Model C was designed to examine in detail the fiscal consequences of the denominational system, to discover potential inconsistencies and weaknesses in that system and to determine the costs associated with them. Specifically, it required the Commission to "examine the extent of duplication resulting from the denominational system and costs associated with such duplication". Model C represents what the education system would look like and cost if it were non-denominational but, in all other respects, structured and operated at the same level of efficiency as the existing denominational system. Given this criteria, there would exist a single set of non-denominational school boards. The design of these boards would parallel the guidelines for school district organization in existence during the 1989-90 school year.

District Organization

Among the three alternative models of district organization outlined in this report, Model C, being a theoretical model designed only to measure the cost of the denominational system, has little practical application. Few would advocate the abolition

of one apparently inefficient education system in favour of another equally inefficient one. The grounds for developing this scenario were to ensure that the two systems being compared – one with a denominational structure and another without – were being compared fairly. It was vital, during the analysis stage, that various scale economies or other organizational efficiencies were not introduced which might bias the results of the comparison.

Given the parameters of this model and the need to derive a single set of educational districts, the decision was made to utilize the number and boundaries of the denomination having the most districts – in this case the 16 districts of the Integrated system. It was recognized that this was by no means ideal. To have used fewer would have introduced potential efficiencies not in existence at the time, and to have used more would not have reflected the organizational principles. Additionally, if one were creating a completely new set of school districts, it is unlikely many of them would match the existing integrated districts because of the demographic shifts which have occurred since they were originally established in the late 1960s, and because of the large Roman Catholic and Pentecostal populations that would have to be accommodated.

Model C thus has 16 non-denominational school districts encompassing the entire province (see Figure 9). A complete list of these districts along with the enrolment, schools, average school size and enrolment in small schools is presented in Table 15. All data are presented without any school consolidation and reallocation of teaching units.

Of particular note is the large range in size among districts. For example, Bay d'Espoir, a geographically large rural board, has a student population of 2,474 students under Model C while St. John's, an urban metropolitan board, has 33,896 students. The average number of students per district (8,132), influenced in large part by the large St. John's district, is somewhat misleading; thus the median (5,407) would be a much more appropriate measure of central tendency. For boards with large urban populations the average school size tended to be more than 300 students, while for rural boards with larger numbers of small schools the average school size tended to be less than 200 students.

Table 16 is a representation of the makeup of school districts as applied across the province under Model C. It presents the number of students by denomination for each district – both the original integrated enrolment taken from Model A and the new enrolment for each denomination determined by this model.

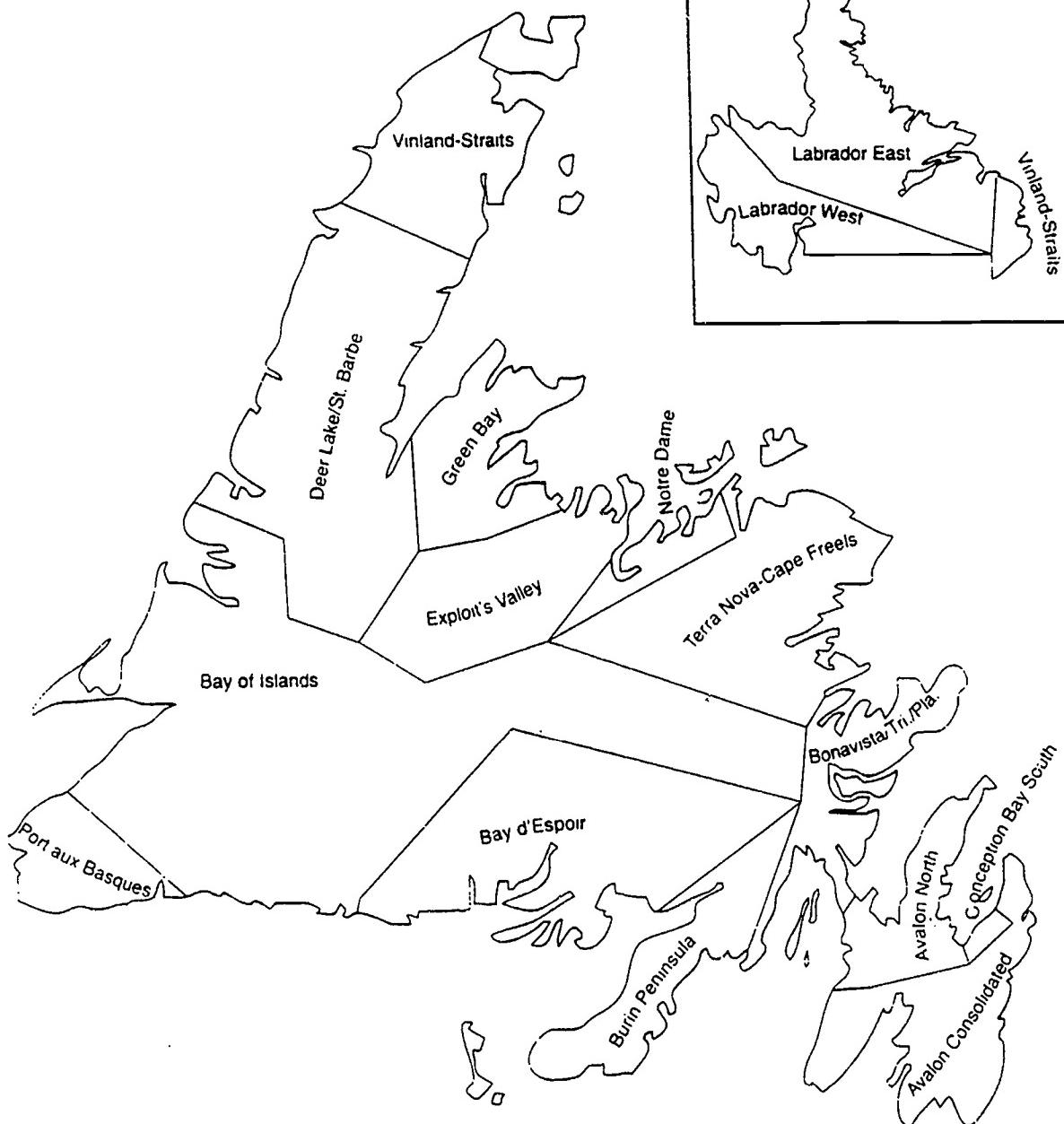
A Non-denominational System**Model C — School Districts.**

Table 15. Enrolment, Schools, Average School Size, and Small School Enrolment by School District, No Consolidation, Model C.¹

School District	Enrolment	Schools	Avg. Size	Small Enrol.	Small %
Vinland-Straits	4,670	46	101.5	2,301	49.3
Deer Lake	5,595	34	164.6	2,161	38.6
Green Bay	5,218	41	127.3	1,735	33.3
Exploits Valley	6,954	32	217.3	560	8.1
Notre Dame	4,669	20	233.5	532	11.4
Terra Nova-Cape Freels	9,044	38	238.0	945	10.4
Bonavista-Trinity-Placentia	7,012	28	250.4	1,123	16.0
Avalon North	14,583	66	221.0	875	6.0
Avalon	33,896	90	376.6	525	1.5
Burin Peninsula	7,372	30	245.7	1,727	23.4
Bay D'Espoir	2,474	16	154.6	1,554	62.8
Port aux Basques	2,913	15	194.2	438	15.0
Bay of Islands	13,944	49	284.6	1,161	8.3
Labrador East	3,528	18	196.0	712	20.2
Labrador West	3,410	8	426.3	265	7.8
Conception Bay South	4,827	12	402.3	7	0.1
Provincial Average	8,132	34	239.6	1,039	312.3
Total	130,109	543	-	16,621	-

¹Based on data for the 1989-90 school year.

School Organization

The process of measuring the potential for school consolidation was similar to that used for Model B. Unlike Model B, however, the criteria for determining potential consolidations were different. Derived from focus groups and expert panels, the criteria were based primarily on a definition of denominational duplication. In this definition, denominational duplication was seen to exist in those communities in which there were schools of more than one denomination and in which the ability to offer a viable education program was either undermined or threatened.

Such a restrictive definition was necessary to avoid the introduction of potential efficiencies which could offset the reliability of any comparisons with the existing denominational system. At this point, some might argue that similar duplication exists in communities in close proximity with one another having schools of more than one denomination. While the educational arguments about the value of schooling in one's own community and of community spirit and lifestyle cannot be overlooked, it was felt these were issues secondary to the maintenance of the denominational system and were more related to efficiency and productivity. Thus, the issue of distance between schools of neighbouring communities was assessed under Models B and D, but not addressed by Model C.

Table 16. Enrollment by School District by Denomination, Model A and C.

School District	Model A			Model C		
	Actual	Int.	% Int.	Actual	% Int.	% RC.
Vinland-Straits	3,637	2556	70.3	4,670	77.9	11.7
Deer Lake	4,021	3148	78.3	5,595	71.9	9.0
Green Bay	3,161	2378	75.2	5,218	60.6	11.9
Exploits Valley	4,005	2925	73.0	6,954	57.6	25.9
Notre Dame	2,954	2434	82.4	4,669	63.3	2.7
Terra Nova-Cape Freels	7,709	6112	79.3	9,044	85.2	13.2
Bonavista-Trinity-Placentia	6,255	5071	81.1	7,012	89.2	10.0
Avalon North	8,683	7348	84.6	14,583	59.5	38.9
Avalon	11,427	9422	82.5	33,896	33.7	63.7
Burin Peninsula	3,239	2794	86.3	7,372	43.9	55.1
Bay d'Espoir	1,691	1488	88.0	2,474	68.4	31.6
Port aux Basques	2,374	2173	91.5	2,913	81.5	18.5
Bay of Islands	6,320	5304	83.9	13,944	45.3	53.1
Labrador East	2,205	1708	77.5	3,528	46.4	52.4
Labrador West	1,923	1470	76.4	3,410	87.9	12.1
Conception Bay South	3,480	2890	83.0	4,827	72.1	27.9
Total	73,084	59,221	81.0	130,109	56.2	38.6
					5.0	0.2
					100.0	100.0

To complete the task of ascertaining the extent of duplication at the school level, it was necessary to establish several additional criteria which would apply equally to every school in the province. Applying these criteria would allow the establishment of a list of communities where duplication exists for purely denominational reasons. These other criteria were

1. schools matched only by schools offering the same grades;
2. where more than one school is involved, such as in an urban area, schools matched by the nearest school; and
3. busing calculated for children to attend the nearest school.

Some of the same limitations in applying the criteria for consolidation experienced in Model B are manifest in this model as well. The lack of an understanding of the local political environment and having no unified local database with demographic projections, is admittedly restrictive but not insurmountable. However, the absence of such a database inhibits a healthy and informed debate among educators and parents about the potential for denominational sharing.

Using the criteria presented above, 33 communities were identified as having one or more schools which could be consolidated. The complete list is presented in Table 17. The 89 schools identified, depicting 42 potential consolidations, represent the most obvious cases of denominational duplication. In some cases, three schools were identified which could be reduced to two. As with Model B, the individual schools which would close or remain open were not specified, and the final choices were based on sound educational principles only in those areas where it was felt a more complete educational experience could be guaranteed.

Table 18 presents the allocations for teachers, principals and central office personnel for Model C. Based on the same policies used for Model A, the new model shows a reduction of 219.6 staffing units. Under Model C, there are 7,084 teachers, 369 principals, and 206 central office staff. The greatest difference between models A and C is the loss of 106 program co-ordinators resulting from district consolidation. Of the 64 teaching units lost through school consolidation, 23 are caused by the consolidation of small schools. An interesting sidelight is the loss of 52 special education units for one board based solely on the loss of three schools and the application of current government allocation policy, even though the same special education students would still require the same special education services. Government thus would be well advised to consider resource allocation policies which directly address student needs rather than ones based on numbers of schools and district enrolments. Such policies now militate against any form of school consolidation.

Table 17. Examples of Communities Where Consolidation of Schools across Denominational Lines Is Recommended.

Community	Schools	Denomination	Gds.	No.
1. Badger	Badger Elem Avoca Coli	Pentecostal Roman Catholic	K-8 K-12	55 161
2. Baie Verte	St. Pius X H.S. Beothuck Coll	Roman Catholic Integrated	7-12 7-12	184 458
3. Baie Verte	R. T. Harvey St. Pius X Elem	Integrated Roman Catholic	K-6 K-6	126 159
4. Bay Roberts	Lyndale Academy Amalgamated Elem	Seventh-Day Adv. Integrated	K-9 K-9	15 212
5. Bell Island	St. Boniface C.H. St. Michael's	Integrated Roman Catholic	7-12 7-12	196 298
6. Bishop's Falls	Bishop's Falls Elem Helen Tulk	Pentecostal Integrated	K-6 K-6	127 184
7. Botwood	L. P. Purchase Aca Botwood Academy Pri	Pentecostal Integrated	K-7 K-3	137 202
8. Botwood	Exploits Valley Aca Botwood Academy	Seventh-Day Adv. Integrated	K-9 4-8	22 353
9. Brigus	Brigus Academy St. Edward's Elem	Integrated Roman Catholic	K-9 K-7	183 296
10. Buchans	St. Theresa's A.G. Buchans Elem	Roman Catholic Integrated	K-12 K-6	79 103
11. Burlington	Greenwood Elem M. W. Jeans Aca	Integrated Pentecostal	K-6 K-7	15 68
12. Carbonear	St. Clare's C.H. Carbonear Coll	Roman Catholic Integrated	7-12 7-12	251 410
13. Carmanville	Carmanville Elem Carmanville School	Pentecostal Integrated	K-6 K-12	16 491
14. Corner Brook	Highview Academy All Hallows School	Seventh-Day Adv. Roman Catholic	K-12 K-7	66 194
15. Deer Lake	St. Francis X. H.S. Elwood R.H. Deer Lake School	Roman Catholic Integrated Pentecostal	K-12 9-12 K-12	252 287 321
16. Dunville	Grace Elem St. Anne's Aca St. Martin's C.H.	Integrated Roman Catholic Integrated	K-6 K-12 7-12	51 429 68
17. Gander	St. Paul's C.H. Gander Coll	Roman Catholic Integrated	7-12 10-12	281 390
18. Harbour Grace	St. Paul's C.H. St. Francis C.H.	Integrated Roman Catholic	7-12 7-12	227 279
19. Hawkes Bay	Ingomachoxi Elem Ralph Hamum Elem	Integrated Pentecostal	K-7 K-12	50 148
20. Lethbridge	Bayview Academy L.R. Ash Elem	Seventh-Day Adv. Integrated	K-9 K-8	8 265
21. Marystowm	Creston Academy Sacred Heart Elem Creston Academy	Pentecostal Roman Catholic Seventh-Day Adv.	K-8 K-6 K-9	54 740 19

Community	Schools	Denomination	Gds.	No.
22. Ming's Bight	Seaside Elem Ocean View Elem	Integrated Pentecostal	K-6 K-7	16 53
23. Norris Arm	Norris Arm Carmel Coll	Integrated Roman Catholic	K-9 K-12	120 126
24. Port de Grave	St. Luke's Elem Port de Grave	Integrated Pentecostal	K-6 K-9	63 114
25. Pouch Cove	Pouch Cove Elem St. Agnes Elem	Integrated Roman Catholic	K-6 K-6	150 177
26. Robert's Arm	Crescent Elem R. W. Parsons Aca	Integrated Pentecostal	4-6 K-6	50 82
27. Roddickton	Evely Collegiate A. C. Palmer Coll	Integrated Pentecostal	7-12 7-12	110 84
28. Roddickton	Roddickton Elem A. C. Palmer Aca	Integrated Pentecostal	K-6 K-6	93 92
29. South Brook	Hall's Bay Elem South Brook Elem	Integrated Pentecostal	K-6 K-6	30 64
30. Springdale	Grant Collegiate Charisma Coll	Integrated Pentecostal	7-12 7-12	328 349
31. Springdale	Charisma Aca Indian River Elem	Pentecostal Integrated	K-6 K-6	165 215
32. St. John's	Our Lady of Mercy Presentation Elem	Roman Catholic Roman Catholic	K-8 K-3	220 221
33. St. John's	Brinton Memorial St. Pius X Elem	Integrated Roman Catholic	K-6 K-4	191 359
34. St. John's	St. John's Elem Bishop Abraham	Seventh-Day Adv. Integrated	K-6 K-6	95 281
35. St. John's	St. John's Aca Booth Memorial	Seventh-Day Adv. Integrated	7-12 10-12	76 534
36. St. John's	Harrington Pri Holy Cross	Integrated Roman Catholic	K-4 K-5	164 463
37. Stephenville	L. S. Eddy Coll Stephenville H.S.	Pentecostal Integrated	7-12 6-12	87 384
38. Stephenville	L. S. Eddy Academy W. E. Cormack Aca	Pentecostal Integrated	K-6 K-5	61 220
39. Summerford	Inter Island Academy Summerford Elem	Pentecostal Integrated	K-6 K-6	246 150
40. Triton	Harbour View Brian Peckford Elem	Pentecostal Integrated	K-6 K-6	94 127
41. Victoria	Bethel Academy Persalvic Elementary	Pentecostal Integrated	K-9 K-7	97 321
42. Windsor	Windsor Academy Windsor Elementary	Integrated Pentecostal	K-6 K-6	259 290

Table 18. Academic Allocations by School District, Model C.

School District	Basic	Guid.	Lib.	Small	Mean	Native	French	Spec Ed	Total	School Staff				Central Office Staff			
										Prin.	Supt.	Asst.	Co-ord.	Total	Alloc		
1 Vinland-Straits	202.7	4.7	4.7	31.6	4.0	0.0	0.0	31.1	278.7	13.2	1.0	3.0	8.0	12.0	303.9		
2 Deer Lake-St. Barbe	242.6	5.6	5.6	28.6	2.0	0.0	0.0	37.3	321.7	15.8	1.0	4.0	8.0	13.0	350.5		
3 Green Bay	226.6	5.2	5.2	23.4	2.0	0.0	0.0	34.8	297.3	14.8	1.0	3.0	8.0	12.0	324.0		
4 Exploits Valley	302.0	7.0	7.0	6.9	0.0	0.0	0.0	46.4	369.2	19.7	1.0	4.0	9.0	14.0	402.8		
5 Notre Dame	202.6	4.7	4.7	8.0	0.0	0.0	0.0	31.1	251.1	13.2	1.0	3.0	7.0	11.0	275.3		
6 Terra Nova-Cape Freels	392.4	9.0	9.0	13.9	0.0	0.0	0.0	60.3	484.7	25.5	1.0	5.0	10.0	16.0	526.3		
7 Bon-Tri-Placentia	304.3	7.0	7.0	16.7	0.0	0.0	0.0	46.8	381.8	19.8	1.0	4.0	9.0	14.0	415.6		
8 Avalon North	633.1	14.6	14.6	7.0	0.0	0.0	0.0	97.3	765.5	41.2	1.0	5.0	10.0	16.0	823.8		
9 Avalon	1,476.7	33.9	33.9	6.7	0.0	0.0	0.0	226.9	1,778.2	96.1	1.0	5.0	10.0	16.0	1,890.4		
10 Burin Peninsula	320.0	7.4	7.4	24.8	0.0	0.0	0.0	49.2	408.7	20.8	1.0	4.0	9.0	14.0	443.5		
11 Bay Despoir	107.8	2.5	2.5	23.3	2.0	0.0	0.0	16.6	154.6	7.0	1.0	2.0	7.0	10.0	171.7		
12 Port aux Basques	126.9	2.9	2.9	6.6	2.0	0.0	0.0	19.5	160.8	8.3	1.0	2.0	7.0	10.0	179.1		
13 Bay of Islands-St. George's	609.3	13.9	13.9	14.2	0.0	0.0	7.0	93.6	752.0	39.7	1.0	5.0	10.0	16.0	807.7		
14 Labrador East	153.2	3.5	3.5	10.7	2.0	44.8	0.0	23.5	241.3	10.0	1.0	3.0	7.0	11.0	262.3		
15 Labrador West	150.2	3.4	3.4	4.0	0.0	0.0	2.4	23.1	186.5	9.8	1.0	2.0	7.0	10.0	206.3		
16 Conception Bay South	209.3	4.8	4.8	0.1	0.0	0.0	0.0	32.2	251.2	13.6	1.0	3.0	7.0	11.0	275.9		
Total	5,659.7	130.1	130.1	226.5	14.0	44.8	9.4	869.8	7,084.4	368.5	16.0	57.0	133.0	206.0	7,658.9		

Student Transportation

The cost of student transportation, which is so high in Model B, is only marginally elevated in this model. Because consolidation is restricted to schools within the same community, few additional bus routes are required. In most cases, for example, students could be accommodated through the restructuring of existing services, demanding only a marginal increase in expenditure. In several cases, students could even be accommodated entirely by existing services, thereby achieving considerable savings.

Further investigation found areas where busing services for a single region were administered independently by two, three and even four jurisdictions. Under such circumstances it is virtually impossible to avoid overlapping routes. In some cases, additional routes were in place because of a lack of flexibility on the part of schools and boards. In others, additional routes were in place solely to accommodate the denominational system. For example, Roman Catholic students in Frenchman's Cove, living only minutes from an integrated school in Garnish, were bused 15 km to a Roman Catholic school in Marystown. Under Model C such duplication is avoided and all services are centralized under the jurisdiction of a single board with busing provided only to the nearest school.

Summary of Costs

Table 19 shows comparative expenditures by individual account items for both a sample district and for the province as a whole. The data presented for the sample board under Model A do not represent any particular Model A board but merely illustrate what a comparable Model C board would look like by combining all corresponding costs within the Model C boundary. A provincial summary is included to show the overall potential savings that could be achieved as a result of a single school board model.

Administration expenditures. The cost of operating and maintaining school board offices (\$14.7 million) accounted for 2.9 percent of the total education expenditure. Over \$3.5 million savings were realized between models C and A. Most of this was accomplished through superintendents' salaries and certain economies of scale achieved through the closing of a number of buildings. Of the total administration expenditure, 67.4 percent went on salaries and benefits.

Instruction expenditures. The provision of instruction (\$413.3 million) accounted for 81.8 percent of the total cost, a savings of almost 2 percent over Model A. Of that amount, 96.9 percent is committed to salaries and benefits, and 2.1 percent is spent on instructional materials such as textbooks, resource materials, library supplies and teaching aids. More than \$8.3 million in savings in instructional salaries are identified. The majority of these salary unit reductions are central office personnel.

Operations and maintenance expenditures. Just over \$2 million in savings could be achieved through the consolidation of schools. Of that amount, approximately \$900,000 would be saved through salaries and the remainder through the closure of buildings. The two largest components are the salaries and benefits of janitorial and maintenance staff (\$19.4 million), and heat and light (\$12.3 million). Repairs and maintenance to buildings and equipment account for another \$6.2 million.

Pupil transportation expenditures. Of the total cost of student transportation under Model A (\$29.4 million), \$439,400 could be saved through the consolidation of schools, children travelling to the nearest school, and a single system of operating buses within each region. Little could be done to save on the approximately \$2 million spent for the transportation of students with special physical needs; depending on where the students are, real costs could go up or down.

Other expenditures. The remaining one percent of the total cost of education, spent on various ancillary services and interest expenses, is not affected by the model and no savings were achieved. The largest component (\$3.3 million), committed to interest on capital, would not disappear through the consolidation of school boards.

Table 19. School Board Expenditures for Sample District and Total Province, Models C and A.

	Current Expenditures	Sample Board			Model A	Model C	Provincial Total
		Combined A	Sample C	C-A			
Administration Expenditures							
51	11 Salaries & Wages (Gross)	724,721	568,509	(156,212)	11,675,338	9,132,323	(2,543,015)
12	Employee Benefits	64,319	50,455	(13,864)	986,744	771,820	(214,924)
13	Office Supplies	41,050	34,893	(6,157)	477,997	431,392	(46,605)
14	Office Furniture & Equipment	2,194	1,865	(329)	93,280	84,185	(9,095)
15	Postage	10,208	8,677	(1,531)	227,471	205,293	(22,178)
16	Telephone	42,623	29,836	(12,787)	653,492	589,777	(63,715)
17	Office Equipment Rentals and Repairs	25,425	25,425	0	413,788	413,788	0
18	Bank Charges	3,925	3,925	0	139,242	139,242	0
19	Electricity	13,433	9,403	(4,030)	259,140	233,874	(25,266)
21	Fuel	0	0	0	52,561	47,436	(5,125)
22	Insurance	1,424	1,424	0	62,532	56,435	(6,097)
23	Repairs & Maintenance (Office Building)	36,373	30,917	(5,456)	190,819	172,214	(18,605)
23	Travel	59,064	41,345	(17,719)	923,405	747,958	(175,447)
25	Board Meeting Expenses	16,576	11,603	(4,973)	290,075	234,961	(55,114)
26	Election Expenses	4,824	4,824	0	107,028	107,028	0
27	Professional Fees	15,321	10,725	(4,596)	403,701	258,369	(145,332)
28	Advertising	21,664	15,165	(6,499)	269,458	218,261	(51,197)
29	Membership Dues	19,567	19,567	0	323,618	207,116	(116,502)
31	Municipal Service Fees	156	156	0	10,406	10,406	0
32	Rental of Office Space	0	0	0	105,388	85,364	(20,024)
33	Relocation Expenses	0	0	0	41,061	164,244	123,183
34	Miscellaneous	13,897	11,812	(2,085)	498,445	385,927	(112,518)
	Total Administration Expenditures	1,116,764	880,526	(236,238)	18,204,989	14,697,412	(3,507,577)

	Instruction Expenditures	Combined A	Sample C	C-A	Model A	Model C	C-A
52	10 Instructional Salaries (Gross)						
11	Tchrs' Sal/Benefits - Reg	22,034,418	21,651,918	(382,500)	385,284,447	376,983,547	(8,300,900)
12	- Substitute	980,461	980,461	0	12,640,731	13,936,406	1,295,675
13	- Board Paid	58,766	58,766	0	1,638,521	1,638,521	0
14	Augmentation	0	0	0	1,300,000	1,300,000	0
15	Employee Benefits	0	0	0	0	0	0
16	School Secretaries - Salaries	290,906	290,906	0	5,004,730	4,516,769	(487,961)
17	- Benefits	21,114	21,114	0	596,338	596,367	29
18	Other (Specify)	0	0	0	870,303	870,383	80
52	40 Instructional Materials	23,385,665	23,003,165	(382,500)	407,335,070	399,841,992	(7,493,078)
41	General Supplies	174,985	174,985	0	2,809,396	3,097,359	287,963
42	Library Resource Materials	69,415	69,415	0	1,408,587	1,552,967	144,380
43	Teaching Aids	242,725	242,725	0	3,242,530	3,242,530	0
44	Textbooks	95,997	95,997	0	1,194,768	1,194,768	0
52	60 Instructional Furniture & Equipment	583,122	583,122	0	8,655,281	9,087,624	432,343
61	Replacement	23,970	23,970	0	986,228	985,242	14
62	Rentals and Repairs	14,732	14,732	0	826,497	826,670	173
52	80 Instructional Staff Travel	38,702	38,702	0	1,812,725	1,812,912	187
81	Program Co-ordinators	49,202	31,702	(17,500)	704,330	465,500	(238,830)
82	Teachers' Travel	989	905	(84)	333,110	306,994	(26,116)
83	In-service and Conferences	84,640	83,982	(658)	760,722	701,081	(59,541)
52	90 Other Instructional Costs	134,831	116,589	(18,242)	1,798,162	1,473,576	(324,586)
91	Postage and Stationery	10,302	10,302	0	395,762	364,734	(31,028)
92	Miscellaneous	15,268	15,268	0	701,410	758,645	57,235
	Total Instructional Expenditures	24,167,890	23,767,148	(400,742)	420,698,410	413,339,483	(7,358,927)

		School Operations & Maintenance	Combined A	Sample C	C-A	Model A	Model C	C-A
53	1:	Salaries - Janitorial	883,399	869,998	(13,401)	14,599,199	13,951,174	(648,025)
12	12	- Maintenance	1,438	1,416	(22)	3,536,956	3,379,959	(156,997)
13	Employee Benefits	94,818	93,380	(1,438)	2,126,875	2,032,468	(94,407)	
14	Electricity	646,435	636,629	(9,806)	9,492,341	9,070,998	(421,343)	
15	Fuel	108,432	106,787	(1,645)	3,336,877	3,188,761	(148,116)	
16	Municipal Service Fees	21,079	20,759	(320)	411,806	393,527	(18,279)	
17	Telephone	71,728	70,640	(1,088)	1,279,639	1,222,839	(56,800)	
18	Vehicle Operating and Travel	8,834	8,700	(134)	379,456	362,613	(16,843)	
19	Janitorial Supplies	74,561	73,430	(1,131)	1,411,352	1,348,705	(62,647)	
21	Janitorial Equipment	9,340	9,198	(142)	95,390	91,156	(4,234)	
22	Repairs & Maintenance - Buildings	152,743	150,426	(2,317)	6,337,011	6,055,726	(281,285)	
23	23	- Equipment	1,824	1,796	(28)	157,267	150,286	(6,981)
24	Contracted Services - Janitorial	69,593	68,537	(1,056)	980,735	937,202	(43,533)	
25	Snow Clearing	54,815	53,983	(832)	864,996	826,601	(38,395)	
26	Rentals	0	0	0	462,588	442,055	(20,533)	
27	Other (Specify)	4	4	0	112,035	107,062	(4,973)	
	Total Operations & Maintenance	2,199,043	2,165,684	(33,359)	45,584,523	43,561,131	(2,023,392)	

100

39

		Pupil Transportation Expenditures	Combined A	Sample C	C-A	Model A	Model C	C-A
54	10	Operation & Maintenance of Board Owned Fleet						
11		Salaries - Administration	55,698	23,747	(31,951)	369,721	364,197	(5,524)
12		- Drivers and Mechanics	798,164	381,050	(417,114)	5,932,581	5,843,940	(88,641)
13		Employee Benefits	70,594	43,996	(26,598)	684,979	674,744	(10,235)
14		Debt Repayment - Interest	240,000	76,469	(163,531)	1,190,554	1,172,765	(17,789)
15		- Principal	249,401	93,652	(155,749)	1,458,070	1,436,284	(21,786)
16		Bank Charges	2,658	333	(2,325)	5,178	5,101	(77)
17		Gas and Oil	175,837	102,945	(72,892)	1,602,746	1,578,799	(23,947)
18		Licenses	17,905	8,301	(9,604)	129,241	127,310	(1,931)
19		Insurance	21,316	9,210	(12,106)	143,394	141,251	(2,143)
21		Maintenance - Fleet	99,738	51,693	(48,045)	804,809	792,784	(12,025)
22		- Building	1,082	2,179	1,097	33,925	33,418	(507)
23		Tires and Tubes	22,145	11,656	(10,489)	181,476	178,764	(2,712)
24		Heat and Light	7,409	3,971	(3,438)	61,829	60,905	(924)
25		Municipal Service	482	382	(100)	5,942	5,853	(89)
26		Snow Clearing	90	1,209	1,119	18,820	18,539	(281)
27		Office Supplies	4,147	1,395	(2,752)	21,712	21,388	(324)
28		Rent	0	0	0	0	0	0
29		Travel	2,342	1,521	(821)	23,674	23,320	(354)
31		Professional Fees	3,925	1,287	(2,638)	20,033	19,734	(299)
32		Miscellaneous	9,460	3,547	(5,913)	55,218	54,393	(825)
33		Telephone	2,847	1,425	(1,422)	22,185	21,854	(331)
34		Capital Expenditure Out of Current	0	1,493	1,493	23,238	22,891	(347)
			1,785,240	821,459	(933,781)	12,789,325	12,598,233	(191,090)
54	40	Contracted Services	0	0				
41		Regular Transportation	6,064	946,906	940,842	14,742,402	14,522,130	(220,272)
42		Handicapped	132,003	119,790	(12,213)	1,865,012	1,837,146	(27,866)
		Total Pupil Transportation	138,067	1,066,696	928,629	16,607,414	16,359,276	(248,138)
			1,923,307	1,888,155	(35,152)	29,396,739	28,957,511	(439,228)

111

		Other Expenditures	Combined A	Sample C	C-A	Model A	Model C	C-A	
55	10	Ancillary Services							
	11	Operation of Teachers' Residences	10,421	10,421	0	595,307	595,307	0	
31		Cafeterias	110,567	110,567	0	197,162	197,162	0	
32		Other (Specify)	0	0	0	205,022	205,022	0	
56	10	Interest Expense							
	12	Capital							
		School Construction	326,959	326,959	0	3,166,752	3,166,752	0	
		Equipment	0	0	0	9,741	9,741	0	
		Service Vehicles	987	987	0	2,622	2,622	0	
		Other	1,918	1,918	0	87,414	87,414	0	
	13	Current - Operating Loans							
		- Supplier Interest Charges	36,139	36,139	0	1,420,887	1,420,887	0	
	14		25,239	25,239	0	44,304	44,304	0	
		Total Interest Expense	61,378	61,378	0	1,465,191	1,465,191	c	
	57	10	Miscellaneous Expenses	391,242	391,242	0	4,731,720	4,731,720	0
	57	11	Miscellaneous (Specify)	2000	2,000	0	66,691	66,691	0
		Total Current Expenditures	29,921,234	29,215,743	(705,491)	519,680,563	506,351,439	(13,329,124)	

103

104

MODEL D - A Rational Non-denominational System

Organization and Structure

Model D responds to both Term 2 and Term 4 of the Commission's Terms of Reference. It examines the extent of duplication resulting from the denominational system (#4) but also considers the extent to which school districts and schools can be further consolidated (#2). In other words, it presents a picture of what Model C would look like and cost at a maximum level of consolidation of and sharing among schools and school districts; or what Model B would look like if it were implemented without denominational considerations. Within this framework, there would also exist a single set of non-denominational boards, but their number would be reduced to minimum levels. In addition, schools would be consolidated, based upon acceptable parameters for school size, reasonable conditions for student transportation and demonstrated need.

District Organization

In order to gain insight into the issues associated with school district effectiveness, the following steps were completed: a review of the related literature, the examination of a number of local studies, the development of an independent survey, the completion of a background report on the subject, conducting several focus groups and interviews, and, upon reaching its conclusions, the completion of sensitivity analyses. It was concluded that the ideal operating size of a school district was simply that, *an ideal* — a rather abstract idea that helps to guide the thinking of individuals and groups in their quest for optimum effectiveness. In spite of the vast source of information available, there was no conclusive evidence to suggest any one size can be applied universally. It was evident, rather, that the rationale which must guide the decisions surrounding either the consolidation of existing districts or the formation of new ones, must not be guided by size alone but must consider a range of administrative and educational factors such as the following:

Administrative Factors:

- fiscal conditions
- geographic size
- population dynamics
- community/regional identity
- communication systems

Educational Factors:

- needs of children
- school characteristics
- quality of educational services
- nature and extent of central office services
- quality of personnel

- location of regional services
- climatic conditions
- historical links
- availability of appropriate resources

The goal of a viable school district is to achieve a blend of effective governance and responsible administration within the context of how it delivers educational programs and services. To achieve this end, to ensure equality of educational opportunity, to facilitate effective interaction between the policy side and the delivery side, and to link with the appropriate health care and social services systems, districts must encompass an appropriate geographic area (a community or region).

Translating these conditions into appropriate decisions concerning the number and boundaries of school districts for Model D was not without its difficulties. If, for example, there was consensus among educators regarding the ideal size and nature of school districts or among local officials regarding the best location and types of available services, decisions would be uncomplicated but such consensus does not exist. As a result, priorities had to be established, assumptions made and certain factors weighed against others. Conditions in some districts, however, – such as low or decreasing enrolments, high per-pupil expenditures, lack of adequate resources, few available services, high *per capita* debt, and the close proximity of other districts to which students could be transported – made decisions on restructuring more obvious.

A complete list of the alternative school districts generated for Model D, along with the enrolment, schools, average school size and enrolment in small schools, is presented in Table 20. While the Avalon East district has the largest student population in this model, it is far from the largest geographically. The average district under the model had 14,457 students in 53 schools. A map showing the geographic boundaries of the nine districts under Model D is presented in the Figure 10.

Table 21 shows the make-up of school districts under Model D with a single set of rationalized boundaries applied across the province. It also shows the number of students by denomination for each district. The composition of the Avalon West and Labrador districts largely resembles the total provincial composition. The Avalon East, Burin Peninsula and Stephenville-Port aux Basques districts have larger Roman Catholic populations, the Gander-Bonavista and Corner Brook-Deer Lake districts have large integrated populations, while the Grand Falls-Green Bay-Bay d'Espoir district has a significant Pentecostal component.

School Organization.

Measuring the potential for school consolidation again required the establishment of rules to guide the decision-making process. The rules were applied sequentially: first, those developed for Model C (within communities) and then those for Model B (between communities), but ensuring that the same school was not consolidated twice.

Table 20. Enrolment, Schools, Average School Size, and Small School Enrolment by School District, with Model C Consolidation, Model D.¹

School District	Enrolment	Schools	Avg. Size	Small Enrol.	Small %
Avalon East	38,097	87	437.9	250	0.7
Avalon West	15,737	61	258.0	1,131	7.2
Burin Peninsula	7,372	26	283.5	1,654	22.4
Gander-Bonavista	15,691	58	270.5	1,598	10.2
Grand Falls-Green Bay-Bay d'Espoir	19,152	87	220.1	3,941	20.6
Corner Brook-Deer Lake	11,531	43	268.2	1,552	13.5
Stephenville-Port aux Basques	9,739	39	249.7	1,087	11.2
Northern Peninsula-Labrador South	5,852	47	124.5	2,701	46.2
Labrador	6,938	26	266.8	977	14.1
Provincial Average	14,457	53	261.8	1,655	145.9
Total	130,109	474	-	14,891	-

¹Based on data for the 1989-90 school year.

Table 21. Enrolment by School District by Denomination, Model D.

School District	Actual	% Int.	% RC.	% Pent.	% SDA.	Total
Avalon East	38,097	39.1	58.6	1.9	0.4	100.0
Avalon West	15,737	57.2	41.4	1.3	0.1	100.0
Burin Peninsula	7,372	43.9	55.1	0.7	0.3	100.0
Gander-Bonavista	15,691	88.0	10.7	1.2	0.1	100.0
Grand Falls-Green Bay-Bay d'Espoir	19,152	60.8	17.4	21.7	0.1	100.0
Corner Brook-Deer Lake	11,531	67.9	27.1	4.4	0.6	100.0
Stephenville-Port aux Basques	9,739	43.4	55.1	1.5	0.0	100.0
Northern Peninsula-Labrador South	5,852	73.3	17.3	9.4	0.0	100.0
Labrador	6,938	59.5	39.7	0.8	0.0	100.0
Total	130,109	56.2	38.6	5.0	0.2	100.0

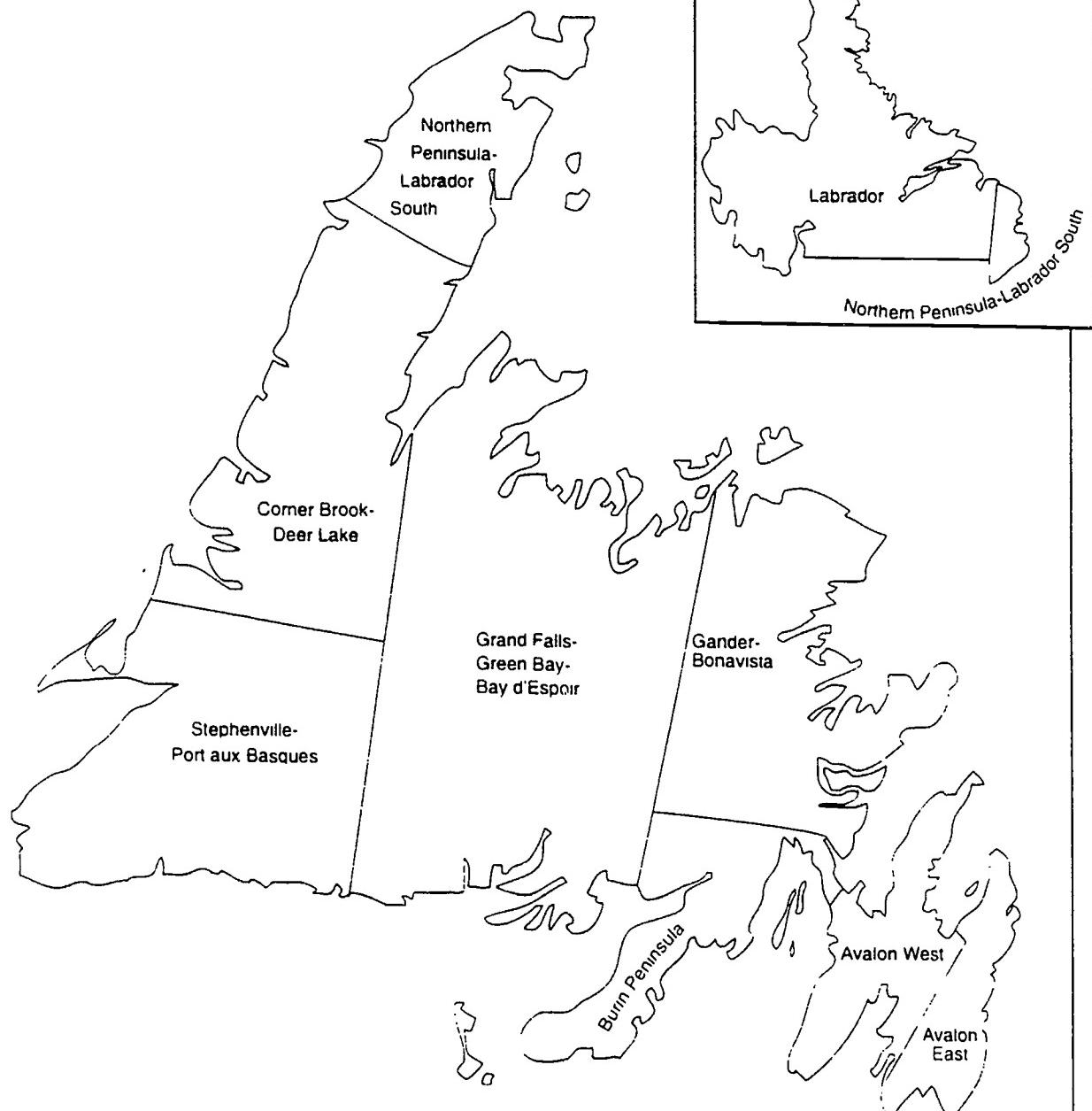
A Rational Non-denominational System**Model D — School Districts.**

Table 22 presents the allocation policies for teachers, principals and central office personnel for Model D. Based on the same allocations as other models, Model D identified a total of 7,421 school staff, a reduction of 1.4 percent from Model A, and 138 central office staff, down 60.9 percent. The greatest differences between models A and D were the losses of 153 program co-ordinators and 39 assistant superintendents through the consolidation of central offices. Of the teaching units lost to school consolidation, 27 were special education units, 26 were small school units, and 38 were units under the *mean allocation* formula.

Summary of Costs

Comparative expenditures by model are presented in Table 23. Again, individual boards have not been included. Comparison of each of the models provides a clear depiction of rationalized and non-rationalized, denominational and non-denominational structures and the potential costs and savings that could be expected.

Administration expenditures. The greatest savings in the cost of operating and maintaining school board offices can be achieved under Model D. The total cost of operating the nine boards (\$13.0 million), is \$5.3 million less than the cost of operating the 29 boards under Model A. Most of the savings come from superintendents' salaries and certain economies of scale achieved through the closing of buildings. However, consolidating two boards does not cut the administrative costs in half: Model D reduces the number of boards under Model A by 69.0 percent, yet the total saving is only 28.9 percent.

Instruction expenditures. The provision of instruction (\$408.0 million) accounts for 81.9 percent of the total cost of Model D, a saving of 3.0 percent compared to costs in Model A. Of that amount, 96.7 percent is committed to salaries and benefits, and 2.3 percent to instructional materials such as textbooks, resource materials, library supplies and teaching aids.

Operations and maintenance expenditures. More than seven percent (\$3.2 million) savings could be achieved through the consolidation of schools. Of that amount, approximately \$1.4 million would be saved through salaries and the remainder through the closure of buildings. The two largest components are the salaries and benefits of janitorial and maintenance staff (\$18.8 million), and heat and light (\$11.9 million). Repairs and maintenance to buildings and equipment account for another \$6.0 million.

Pupil transportation expenditures. While some savings in student transportation services are realized under this model, not all school consolidations led to savings. As with Model B, many consolidations led to additional bus routes. However, given the absence of overlapping bus networks and the capability of introducing the highest levels of flexibility and efficiency, these extra routes do not translate into increased in costs as they did in Model B, and there is, in fact, a marginal net decrease of \$134,000 compared to Model A.

Table 22. Academic Allocations by School District, Model D.

School District	School Staff							Central Office Staff							
	Basic	Guid.	Lib.	Small	Mean	Native	French	Spec Ed.	Total	Prin.	Supt.	Asst.	Co-ord	Total	Alloc.
Avalon East	1,657.2	38.1	38.1	3.8	0.0	0.0	0.0	209.5	1,946.7	93.5	1.0	5.0	10.0	16.0	2,056.2
Avalon West	684.6	15.7	15.7	17.0	0.0	0.0	0.0	110.2	843.1	43.0	1.0	5.0	10.0	16.0	902.1
Burin Peninsula	320.7	7.4	7.4	24.8	0.0	0.0	0.0	51.6	411.9	20.5	1.0	4.0	9.0	14.0	446.4
Gander-Bonavista	682.6	15.7	15.7	24.0	0.0	0.0	0.0	109.8	847.8	45.0	1.0	5.0	10.0	16.0	908.8
Grand Falls-Green Bay-Bay d'Espoir	833.1	19.2	19.2	59.1	0.0	0.0	0.0	134.1	1,064.6	58.0	1.0	5.0	10.0	16.0	1,138.6
Corner Brook-Deer Lake	501.6	11.5	11.5	23.3	0.0	0.0	0.0	80.7	628.6	32.5	1.0	5.0	10.0	16.0	677.1
Stephenville-Port aux Basques	423.7	9.7	9.7	16.3	0.0	0.0	7.0	68.2	534.6	29.5	1.0	5.0	10.0	16.0	580.1
Northern Peninsula-Labrador South	254.6	5.9	5.9	40.5	4.0	0.0	0.0	43.9	354.7	20.5	1.0	4.0	8.0	13.0	388.2
Labrador	301.8	6.9	6.9	14.7	0.0	44.8	2.4	48.6	426.1	20.5	1.0	5.0	9.0	15.0	461.6
Total	5,659.7	130.1	130.1	223.4	4.0	44.8	9.4	856.5	7,058.0	363.0	9.0	43.0	86.0	138.0	7,559.0

Table 23. School Board Expenditures for Total Province, All Models.

		Current Expenditures	Model A	Model B	Model C	Model D	Savings D-C	Savings D-B
<i>Administration Expenditures</i>								
51	11	Salaries & Wages (Gross)	11,675,338	10,475,472	9,132,323	7,817,370	(1,314,952)	(2,658,102)
12		Employee Benefits	986,744	885,337	771,820	660,687	(111,134)	(224,650)
13		Office Supplies	477,997	454,097	431,392	409,823	(21,570)	(44,274)
14		Office Furniture & Equipment	93,280	88,616	84,185	79,976	(4,209)	(8,640)
15		Postage	227,471	216,097	205,293	195,028	(10,265)	(21,070)
16		Telephone	653,492	620,817	589,777	560,288	(29,489)	(60,530)
17		Office Equipment Rentals and Repairs	413,788	413,788	413,788	413,788	0	0
18		Bank Charges	139,242	139,242	139,242	139,242	0	0
19		Electricity	259,140	246,183	233,874	222,180	(11,694)	(24,003)
21		Fuel	52,561	49,933	47,436	45,064	(2,372)	(4,868)
22		Insurance	62,532	59,405	56,435	53,613	(2,822)	(5,792)
23		Repairs & Maintenance (Office Building)	190,819	181,278	172,214	163,603	(8,611)	(17,675)
23		Travel	923,405	831,065	747,958	673,162	(74,796)	(157,902)
25		Board Meeting Expenses	290,075	261,068	234,961	211,465	(23,496)	(49,603)
26		Election Expenses	107,028	107,028	107,028	107,028	0	0
27		Professional Fees	403,701	322,961	258,369	206,695	(51,674)	(116,266)
28		Advertising	269,458	242,512	218,261	196,435	(21,826)	(46,077)
29		Membership Dues	323,618	258,894	207,116	165,692	(41,423)	(93,202)
31		Municipal Service Fees	10,406	10,406	10,406	10,406	0	0
32		Rental of Office Space	105,388	94,849	85,364	76,828	(8,536)	(18,021)
33		Relocation Expenses	41,061	123,183	164,244	205,305	41,061	82,122
34		Miscellaneous	498,445	435,398	385,927	336,459	(49,468)	(98,939)
		Total Administration Expenditures	18,204,989	16,517,630	14,697,412	12,950,138	(1,747,274)	(3,567,92)

			Model A	Model B	Model C	Model D	D-C	D-B
52	10	Instructional Salaries (Gross)						
11		Tchrs' Sal/Benefits - Reg	385,284,447	376,983,547	371,181,372	(5,802,175)		(8,642,275)
12		- Substitute	12,640,731	13,272,768	13,936,406	14,633,226	696,820	1,360,459
13		- Board Paid	1,638,521	1,638,521	1,638,521		0	0
14		Augmentation	1,300,000	1,300,000	1,300,000	1,300,000	0	0
15		Employee Benefits	0	0	0	0	0	0
16		School Secretaries - Salaries	5,004,730	4,754,494	4,516,769	4,290,930	(225,838)	(463,563)
17		- Benefits	596,338	596,338	596,367	591,219	(5,148)	(5,119)
18		Other (Specify)	870,303	870,303	870,383	870,303	(80)	0
52	40	Instructional Materials	407,335,070	402,256,070	399,841,992	394,505,571	(5,336,421)	(7,750,499)
41		General Supplies	2,809,396	2,949,866	3,097,359	3,252,227	154,868	302,361
42		Library Resource Materials	1,408,587	1,479,016	1,552,967	1,630,616	77,648	151,599
43		Teaching Aids	3,242,530	3,242,530	3,242,530	3,242,530	0	0
44		Textbooks	1,194,768	1,194,768	1,194,768	1,194,768	0	0
52	60	Instructional Furniture & Equipment	8,655,281	8,866,180	9,087,624	9,320,141	232,516	453,960
61		Replacement	986,228	986,228	986,242	920,926	(65,315)	(65,302)
62		Rentals and Repairs	826,497	826,497	826,670	854,046	27,376	27,549
52	80	Instructional Staff Travel	1,812,725	1,812,725	1,812,912	1,774,972	(37,939)	(37,753)
81		Program Co-ordinators	704,330	535,500	465,500	301,000	(164,500)	(234,500)
82		Teachers' Travel	333,110	319,786	306,994	294,714	(12,280)	(25,071)
83		In service and Conferences	760,722	730,293	701,081	673,038	(28,043)	(57,255)
52	90	Other Instructional Costs	1,798,162	1,585,579	1,473,576	1,268,753	(204,823)	(316,826)
91		Postage and Stationery	395,762	379,932	364,734	350,145	(14,589)	(29,787)
92		Miscellaneous	701,410	729,466	758,645	788,991	30,346	59,524
		Total Instructional Expenditures	1,097,172	1,109,398	1,123,379	1,139,136	15,756	29,738
			420,698,410	415,629,952	413,339,483	408,008,572	(5,330,911)	(7,621,380)

	Operations & Maintenance Expenditures - Schools		Model A	Model B	Model C	Model D	D-C	D-B
53	11 Salaries - Janitorial	14,599,199	14,070,837	13,951,174	13,567,691	(383,483)	(503,195)	
12	- Maintenance	3,536,956	3,408,961	3,379,959	3,287,052	(92,907)	(121,909)	
13	Employee Benefits	2,126,875	2,049,908	2,032,468	1,976,600	(55,867)	(73,308)	
14	Electricity	9,422,341	9,148,834	9,070,998	8,821,659	(249,339)	(327,176)	
15	Fuel	3,336,877	3,216,123	3,188,761	3,101,110	(87,651)	(115,013)	
16	Municipal Service Fees	411,806	396,904	393,527	382,710	(10,817)	(14,194)	
17	Telephone	1,279,639	1,233,332	1,222,839	1,189,226	(33,613)	(44,106)	
18	Vehicle Operating and Travel	379,456	365,724	362,613	352,645	(9,967)	(13,079)	
19	Janitorial Supplies	1,411,352	1,360,278	1,348,705	1,311,633	(37,073)	(48,646)	
21	Janitorial Equipment	95,390	91,938	91,156	88,650	(2,506)	(3,288)	
22	Repairs and Maintenance - Buildings	6,337,011	6,107,689	6,055,726	5,889,269	(166,457)	(218,420)	
23	- Equipment	157,267	151,576	150,286	146,155	(4,131)	(5,421)	
24	Contracted Services - Janitorial	980,735	945,244	937,202	911,441	(25,761)	(33,803)	
25	Snow Clearing	864,996	833,694	826,601	803,880	(22,721)	(29,814)	
26	Rentals	462,588	445,848	442,055	429,904	(12,151)	(15,944)	
27	Other (Specify)	112,035	107,981	107,062	104,119	(2,943)	(3,862)	
	Total Operations & Maintenance	45,584,523	43,934,921	43,561,131	42,363,744	(1,197,387)	(1,571,177)	

		Pupil Transportation Expenditures	Model A	Model B	Model C	Model D	D-C	D-B
54	10	Operation & Maintenance of Board Owned Fleet	369,721	390,346	364,197	369,721	5,524	(20,625)
11		Salaries - Administration	5,932,581	6,263,539	5,843,940	5,932,581	88,641	(330,958)
12		- Drivers and Mechanics						
13		Employee Benefits	684,979	723,192	674,744	684,979	10,235	(38,213)
14		Debt Repayment - Interest	1,190,554	1,256,971	1,172,765	1,190,554	17,789	(66,417)
15		- Principal	1,458,070	1,539,411	1,436,284	1,458,070	21,786	(81,341)
16		Bank Charges	5,178	5,467	5,101	5,178	77	(289)
17		Gas and Oil	1,602,746	1,692,157	1,573,799	1,602,746	23,947	(89,411)
18		Licenses	129,241	136,451	127,310	129,241	1,931	(7,210)
19		Insurance	143,394	151,393	141,251	143,394	2,143	(7,999)
21		Maintenance - Fleet	804,809	849,706	792,784	804,809	12,025	(44,897)
22		- Building	33,925	35,818	33,418	33,925	507	(1,893)
23		Tires and Tubes	181,476	191,600	178,764	181,476	2,712	(10,124)
24		Heat and Light	61,829	65,278	60,905	61,829	924	(3,449)
25		Municipal Service	5,942	6,273	5,853	5,942	89	(331)
26		Snow Clearing	18,820	19,870	18,539	18,820	281	(1,050)
27		Office Supplies	21,712	22,923	21,388	21,712	324	(1,211)
28		Rent	0	0	0	0	0	0
29		Travel	23,674	24,995	23,320	23,674	354	(1,321)
31		Professional Fees	20,033	21,151	19,734	20,033	299	(1,118)
32		Miscellaneous	55,218	58,298	54,393	55,218	825	(3,080)
33		Telephone	22,185	23,423	21,854	22,185	331	(1,238)
34		Capital Expenditure Out of Current	23,238	24,534	22,891	23,238	347	(1,296)
			12,789,325	13,502,796	12,598,235	12,789,325	191,090	(713,471)
54	40	Contracted Services						
41		Regular Transportation	14,742,402	15,564,828	14,522,130	14,646,093	123,963	(918,735)
42		Handicapped	1,865,012	1,969,054	1,837,146	1,827,322	(9,824)	(141,732)
		Total Pupil Transportation	16,607,414	17,533,882	16,359,276	16,473,415	114,139	(1,060,467)
			29,396,739	31,036,678	28,957,511	29,262,740	305,229	(1,773,938)

		Other Expenditures	Model A	Model B	Model C	Model D	D-C	D-B
55	10	Ancillary Services						
	11	Operation of Teachers' Residences	595,307	595,307	595,307	595,307	0	0
31		Cafeterias	197,162	197,162	197,162	197,162	0	0
32		Other (Specify)	205,022	205,022	205,022	205,022	0	0
56	10	Interest Expense	997,491	997,491	997,491	997,491	0	0
	12	Capital						
		School Construction	3,166,752	3,166,752	3,166,752	3,166,752	0	0
		Equipment	9,741	9,741	9,741	9,741	0	0
		Service Vehicles	2,622	2,622	2,622	2,622	0	0
		Other	87,414	87,414	87,414	87,414	0	0
			3,266,529	3,266,529	3,266,529	3,266,529	0	0
13		Current - Operating Loans	1,420,887	1,420,887	1,420,887	1,420,887	0	0
14		- Supplier Interest Charges	44,304	44,304	44,304	44,304	0	0
			1,465,191	1,465,191	1,465,191	1,465,191	0	0
		Total Interest Expense	4,731,720	4,731,720	4,731,720	4,731,720	0	0
57	10	Miscellaneous Expenses						
57	11	Miscellaneous (Specify)	66,691	66,691	66,691	66,691	0	0
		Total Current Expenditures	519,680,563	512,915,083	506,351,439	498,381,096	(7,970,343)	(14,533,986)

121

121

5

CONCLUSIONS

Two concerns central to the Commission's Terms of Reference were addressed in this section of the report. The first was the Commission's mandate to examine the extent of the duplication attributable to the denominational structure of schooling, and the second was to determine the extent to which schools and school districts could be further consolidated. Answers to both questions were needed for the Commission to complete the rest of its work and to inform the public about the efficiency of the present school system.

To address these issues a system was formulated for classifying and examining the problem along two dimensions. The first dimension was governance and consisted of two categories: a denominational category and a non-denominational category. The second dimension was operational performance and, again, was examined through two alternative categories: the current level of organizational efficiency and a proposed level of increased efficiency.

Since each dimension had two discrete categories and there were two dimensions, four types of school systems could be examined and cost differences between types could be estimated in order to ascertain the relative efficiencies of each type. The four empirical categories were given the labels Model A, Model B, Model C and Model D. Both A and B were models of a denominational system corresponding to the existing system with its four denominational categories: Integrated, Roman Catholic, Pentecostal and Seventh Day Adventist. What distinguished Models A and B was the organizational effectiveness or operational performance dimension. Model A was the status quo; that is, the model based on prevailing (1989-90) efficiencies. Model B was based on the efficiencies proposed in the Commission's Terms of Reference — maximum sharing and maximum consolidation. It is useful to note, then, that any efficiencies gained by Model B over Model A would be efficiencies *within* the existing denominational structure.

In contrast to Models A and B, Models C and D were non-denominational

models. This is not to say that Models C and D could not be connected with religion, only that for governing purposes denominations would no longer have legalized monopolistic control. All classes of persons, including religious persons not of the founding denominations, and those with no religion, would be equally eligible to participate in school board elections and as members of school councils. Model C, while non-denominational, was in every other respect organized along the same lines as Model A, the *status quo*. One could regard Model C as being of academic interest only because no one would advocate establishing an inefficient organization. Model D, on the other hand, was a non-denominational model which maximized the sharing of services, like Model B, and the consolidation of schools, as in Model C.

The comparative costs of the four types of school systems are presented in Figure 11. Model A, the actual situation in 1989-90, cost \$519.7 million; Model B, the denominational system with maximum sharing and consolidation, would have cost \$512.9 million; Model C, the non-denominational model with 1989-90 efficiencies, would have cost \$506.4 million; and Model D, the non-denominational model with maximum sharing and consolidation, would have cost \$498.4 million.

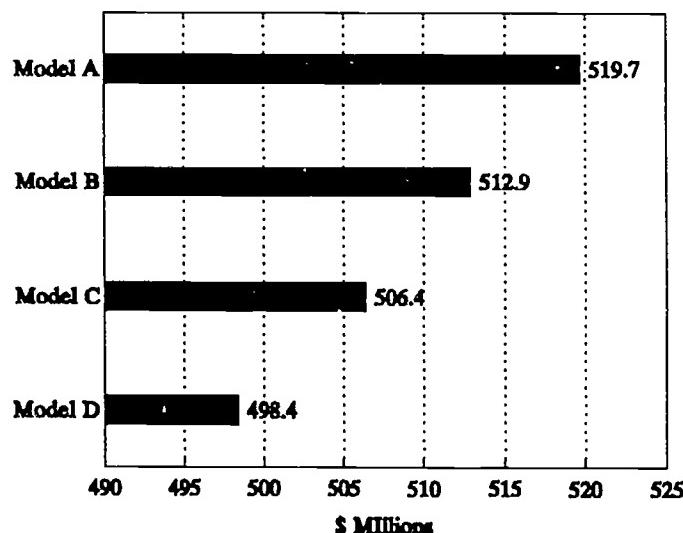


Figure 11. Total Operating Costs under Each Model, 1989-90.

The comparative savings between various combinations of Models is illustrated in Figure 12. In theory, there would be significant savings in a streamlined denominational system, Model B, which could result in a \$6.8 million reduction from the *status quo*, but more considerable savings would be gained by adopting Model D, the non-denominational model with maximum consolidation, with savings of approximately \$21.3 million a year.

The next critical question, then, is which components of the school system account for the increased efficiency of Model D over Model B; that is, what efficiency is the result of the non-denominational system alone. Each model was broken down into five components for costing purposes: administration expenditures, instruction expenditures, operations and maintenance expenditures, transportation expenditures, and other expenditures. Although the largest of these expenditures, by a factor of six, is the

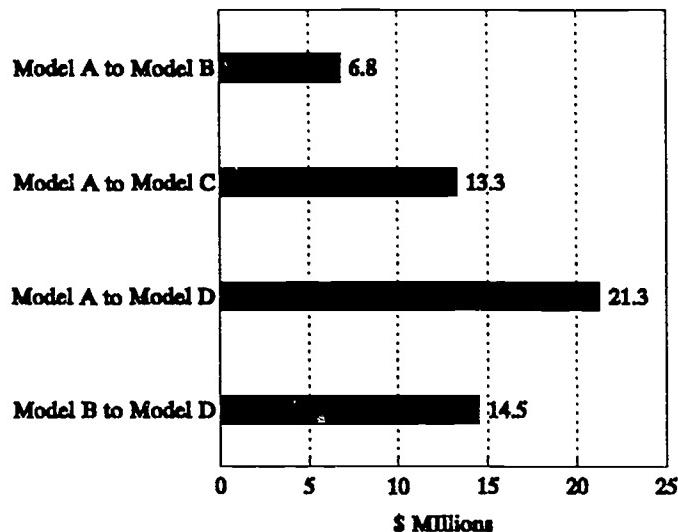


Figure 12. Differences between Individual Models, 1989-90.

instruction category (mainly teachers' salaries) most of the savings in Model D were from savings on central office staff salaries. Comparisons between the two models show that under the basic formula there were no savings in classroom teaching salaries, but that the salary for 47 school staff positions could be saved along with the salary for 100 central office staff positions, primarily through the consolidation of small schools and the type of formula used to allocate special education personnel. This is indicative of the somewhat inflated administrative structure of the existing school system. While the differences between Models B and D account for 147 salary units, the total difference between the status quo and the most efficient systems, Models A and D, account for savings of 320 salary units.

The other alternative is to streamline the denominational model and leave it at that. The savings would be about \$6.8 million, or \$52 per student, and the number of teaching and administrative jobs lost would be at a minimum. While the system would not be the most efficient possible, it would preserve the historic *denominational governing structure*, safeguard teaching jobs, and maximize sharing and consolidation, at least to the degree it is possible within the denominational framework. However, it cannot be assumed that Newfoundlanders wish to preserve the historic denominational system.

If it is agreed that the system has to be changed in some way to make it more efficient and to better rationalize the use of our scarce educational resources, the true alternatives become Models B and D and the real issue becomes one of how *much* change is best. It is one thing to describe an ideal system and another to prescribe it. In this section the overwhelming emphasis was on describing the costs of schooling, given specified assumptions about structure and organization.

Bibliography

- Bentkover, J.D., Covello, V.T., and Mumpower, J. (eds). (1986). *Benefits Assessment: The state of the art*. Dordrecht, The Netherlands: D. Reidel Publishing Co.
- Bleau, Mike. (1990). *Report on a Review of Modelling Methodology to the Royal Commission of Inquiry into the Delivery of Programs and Services in Primary, Elementary, Secondary Education*. Toronto, Ont: Author.
- Brown, Wilfred. (1981). *Education Finance in Canada*. Ottawa, Ont: The Canadian Teachers' Federation.
- Coleman, P., Walsh, J., and LaRocque L.. (1988). School District Achievement and Unit Costs. *Canadian Journal of Education*, 13, 231-237.
- Dawson, D.A. (1978). *Economies of Scale and Cost-Quality Relationships in Elementary and Secondary Schools: A survey*. Working Paper No. 4. Toronto, Ont.: Commission on Declining Enrolments.
- Department of Education. (1991). *Directory of Schools, 1990-91*. St. John's, NF: Queen's Printer.
- Economic Council of Newfoundland and Labrador. (1990). *Education and labour market training: Prerequisites to economic development in Newfoundland and Labrador*. St. John's, NF: Author.
- Fenwick, Peter. (May 23, 1990). Educational Duplication Proves Costly. *The Telegram Sunday*, p. 5.
- Guthrie, J.W. (1979). Organizational Scale and School Success. *Educational Evaluation and Policy Analysis*, 1(1), 17-27.
- Hearn, Loyola. (Oct. 23, 1986). Letter to Roger Grimes, Newfoundland Teachers' Association in response to Exploring New Pathways. With Permission.
- Heikkinen, M.W.. (1987). The Academic Preparation of Idaho Science Teachers based on School District Size. *Research in Rural Education*, 4, 89-94.
- Howley, C.B. (1989). Efficiency and the Characteristics of School Districts: A study of 178 school districts in Kentucky. *Research in Rural Education*, 6, 33-44.
- Levin, Henry M. (1983). *Cost-effectiveness: A primer*. Beverly Hills, CA: Sage Publications.
- Levin, Henry M. (1989). Mapping the economics of education, an introductory essay. *Educational Researcher*, May, 13-16,73.
- Marshall, D.G. (February 1-2, 1988). *The cost of Small Schools*. Paper presented to the National Symposium on Small Schools, Toronto, Ont: Ontario Institute for Studies in Education.
- McKim, William. (1988). *The Vexed Question: Denominational education in a secular age*. St. John's, NF: Breakwater Books.
- Monahan, J. (1989). *Student Achievement and Size of District in North Texas*. Baldwin City, KA: Baker University.
- Monk, D. (1988). *Disparities in Curricular Offerings: Issues and policy alternatives for small rural schools*. Columbus, Ohio: ERIC Information Analysis Center for Science, Mathematics, and Environmental Education. (ERIC Document Reproduction Service No. ED 307096).
- Newfoundland Teachers' Association. (1986). *Exploring New Pathways*. St. John's, NF: Author.
- Organization for Economic Co-operation and Development. (1984). *Education Committee: Draft statement of issues*. (Document No. ED(84)7). Paris, FR: Office of the Education Committee.
- Press, H.L. (1990). *Toward 2000: Trends report II, elementary-secondary projections*. St. John's, NF: Division of Evaluation and Research, Department of Education, Queen's Printer.
- House, D. (1986a). *Building on Our Strengths*. Royal Commission on Employment and Unemployment. St. John's, NF: Robinson-Blackmore.
- House, D. (1986b). *Education for Self-reliance: A report on education and training in Newfoundland*. Royal

- Commission on Employment and Unemployment. Background report. St. John's, NF: Robinson-Blackmore.
- Riggs, F. (1987). *Report of the Small Schools Study Project*. St. John's, NF: Jesperson Printing.
- Schmid, A. Allan. (1989) *Benefit-cost Analysis: A political economy approach*. Boulder, CO: Westview Press, Inc.
- Smith, N.L., and Smith, J.K. (1984). *Cost Analysis in Educational Evaluation*. (ROEP Paper and Report Series No. 100). Portland, OR: Northwest Regional Educational Laboratory.
- Smith, V.K. (1986). A Conceptual Overview of the Foundations of Benefit-Cost Analysis. In J.D. Bentkover et al. (eds), *Benefits Assessment: The state of the art*, (13-34). Dordrecht, Holland: D. Reidel Publishing Company.
- St. John's Board of Trade. (November 23, 1989). *Brief to Premier and his Cabinet*. St. John's, NF: Author.
- Strong, C. (1991). *Issues Related to School Size in Newfoundland and Labrador*. Background report to the Royal Commission on Education. St. John's, NF: Queen's Printer.
- Task Force on Education Finance. (1989). *Financing Greater Equality and Excellence in the Newfoundland School System*. St. John's, NF: Queen's Printer.
- Thompson, M. (1980). *Benefit-cost Analysis for Program Evaluation*. Beverly Hills, CA: Sage Publications, Inc.
- Treslan, D. (1991). *An Examination of Critical Factors in the Establishment of Effective School Districts*. Background report to the Royal Commission on Education. St. John's, NF: Queen's Printer.
- Walberg, H.J. and Fowler, W.J. (1987). Expenditure and Size Efficiencies of Public School Districts. *Educational Researcher*, October, 5-13.
- Warren, P.J. (1968). *Report of the Royal Commission on Education and Youth*. St. John's, NF: Queen's Printer.